

# *Planck* 2015 Results: Cosmological Parameter Tables

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## **Abstract**

These tables summarize the results of *Planck* 2015 parameter estimation exploration results. They include *Planck* HFI data in combination with LFI polarization, *Planck* lensing, as well as additional non-CMB data as detailed in the main parameter papers.

# 1 Introduction

The tables are arranged grouped firstly by cosmological model, and then by data combination. The name tags match those of the full chains also provided on the PLA. They all start with **base** to denote the baseline model, followed by the parameter tags of any additional parameters that are also varied (as defined in the parameter paper). Data combination tags are as follows (see the parameters paper for full description and references):

Data tag	Data used
<b>plikHM</b>	baseline high- $\ell$ <i>Planck</i> power spectra ( <b>plik</b> cross half-mission, $30 \leq l \leq 2508$ )
<b>plikDS</b>	high- $\ell$ <i>Planck</i> ( <b>plik</b> cross detsets, $30 \leq l \leq 2508$ )
<b>CamSpecHM</b>	alternative high- $\ell$ <i>Planck</i> ( <b>CamSpec</b> cross half-mission, $30 \leq l \leq 2500$ )
<b>CamSpecDS</b>	high- $\ell$ <i>Planck</i> ( <b>CamSpec</b> cross detsets, $30 \leq l \leq 2500$ )
<b>lowl</b>	low- $\ell$ <i>Planck</i> temperature (Commander, $2 \leq l \leq 29$ )
<b>lowTEB</b>	low- $\ell$ temperature and LFI polarization (bflike, $2 \leq l \leq 29$ )
<b>lowEB</b>	low- $\ell$ LFI polarization only (bflike, $2 \leq l \leq 29$ )
<b>WMAPTEB</b>	low- $\ell$ temperature, and LFI+WMAP polarization (bflike, $2 \leq l \leq 29$ )
<b>lensing</b>	<i>Planck</i> lensing power spectrum reconstruction
<b>lensonly</b>	<i>Planck</i> lensing power spectrum reconstruction only; T,E fixed to best-fit spectrum + priors
<b>zre6p5</b>	A hard prior $z_{\text{re}} > 6.5$
<b>tau07</b>	A Gaussian prior $\tau = 0.07 \pm 0.02$
<b>reion</b>	A hard prior $z_{\text{re}} > 6.5$ , combined with Gaussian prior $z_{\text{re}} = 7 \pm 1$
<b>BAO</b>	Baryon oscillation data from DR11LOWZ, DR11CMASS, MGS and 6DF
<b>JLA</b>	Supernova data from the SDSS-II/SNLS3 Joint Light-curve Analysis
<b>H070p6</b>	A conservative Hubble parameter constraint, $H_0 = 70.6 \pm 3.3$ (Efsthathiou; arXiv:1311.3461)
<b>theta</b>	$100\theta_{\text{MC}}$ fixed to 1.0408
<b>WMAP</b>	The full WMAP (temperature and polarization) 9 year data
<b>WOnlyHeymans</b>	Conservative cut of the CFHTLenS weak lensing data + priors

The high- $\ell$  *Planck* likelihoods have **TT**, **TE**, **EE** variants from each spectrum alone, plus the **TTTEEE** joint constraint.

Data likelihoods are either included when running the chains, or by importance sampling. Data combinations that are added by importance sampling appear at the end of the list, following the **post\_** tag. Note that the best fits are merely examples of parameter combinations that fit the data well, due to parameter degeneracies there may be other combinations of parameters that fit the data nearly equally well.

Beneath each table is the  $\chi^2_{\text{eff}} = -2\log(\text{likelihood})$  for each best fit model, and also the contributions coming from each separate part of the likelihood. Mean minus log likelihoods are also given,  $\bar{\chi}^2_{\text{eff}}$ . The tables also give the  $\chi^2_{\text{eff}}$  of the various component parts of the likelihood, where quoted values are the best-fit and mean, standard deviation (in the case of 1-sigma tables), or effective degrees of freedom ( $\nu$ , defined by  $\sigma^2/2$ ).

The  $R - 1$  value is also given, which measures the convergence of the sampling chains, with small values being better converged. The sampling uncertainty on quoted mean values are typically of order  $R - 1$  in units of the standard deviation.

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15.5	base_nnu_r_plikHM_TT_lowTEB_nnup39_lensing . . . . .	499
15.6	base_nnu_r_plikHM_TTTEEE_lowTEB_nnup39_lensing . . . . .	500
15.7	base_nnu_r_plikHM_TT_lowTEB_nnup57_lensing . . . . .	501
15.8	base_nnu_r_plikHM_TTTEEE_lowTEB_nnup57_lensing . . . . .	502
<b>16</b>	<b>nnu+yhe</b>	<b>503</b>
16.1	base_nnu_yhe_plikHM_TT_lowTEB . . . . .	503
16.2	base_nnu_yhe_plikHM_TT_lowTEB_post_BAO . . . . .	504
16.3	base_nnu_yhe_plikHM_TT_lowTEB_post_H070p6 . . . . .	505
16.4	base_nnu_yhe_plikHM_TT_lowTEB_post_BAO_H070p6_JLA . . . . .	506
16.5	base_nnu_yhe_plikHM_TT_lowTEB_post_lensing . . . . .	507
16.6	base_nnu_yhe_plikHM_TTTEEE_lowTEB . . . . .	508
16.7	base_nnu_yhe_plikHM_TTTEEE_lowTEB_post_BAO . . . . .	509
16.8	base_nnu_yhe_plikHM_TTTEEE_lowTEB_post_H070p6 . . . . .	510
16.9	base_nnu_yhe_plikHM_TTTEEE_lowTEB_post_BAO_H070p6_JLA . . . . .	511
16.10	base_nnu_yhe_plikHM_TTTEEE_lowTEB_post_lensing . . . . .	512
16.11	base_nnu_yhe_CamSpecHM_TT_lowTEB . . . . .	513
16.12	base_nnu_yhe_CamSpecHM_TT_lowTEB_post_BAO . . . . .	514
16.13	base_nnu_yhe_CamSpecHM_TT_lowTEB_post_H070p6 . . . . .	515
16.14	base_nnu_yhe_CamSpecHM_TT_lowTEB_post_BAO_H070p6_JLA . . . . .	516
16.15	base_nnu_yhe_CamSpecHM_TT_lowTEB_post_lensing . . . . .	517
16.16	base_nnu_yhe_CamSpecHM_TTTEEE_lowTEB . . . . .	518
16.17	base_nnu_yhe_CamSpecHM_TTTEEE_lowTEB_post_BAO . . . . .	519
16.18	base_nnu_yhe_CamSpecHM_TTTEEE_lowTEB_post_H070p6 . . . . .	520
16.19	base_nnu_yhe_CamSpecHM_TTTEEE_lowTEB_post_BAO_H070p6_JLA . . . . .	521
16.20	base_nnu_yhe_CamSpecHM_TTTEEE_lowTEB_post_lensing . . . . .	522
<b>17</b>	<b>nrun</b>	<b>523</b>
17.1	base_nrun_plikHM_TT_lowTEB . . . . .	523
17.2	base_nrun_plikHM_TT_lowTEB_post_BAO . . . . .	524
17.3	base_nrun_plikHM_TT_lowTEB_post_JLA . . . . .	525
17.4	base_nrun_plikHM_TT_lowTEB_post_lensing . . . . .	526
17.5	base_nrun_plikHM_TT_lowTEB_post_H070p6 . . . . .	527
17.6	base_nrun_plikHM_TT_lowTEB_post_lensing_BAO_H070p6_JLA . . . . .	528
17.7	base_nrun_plikHM_TT_lowTEB_post_zre6p5 . . . . .	529
17.8	base_nrun_plikHM_TTTEEE_lowTEB . . . . .	530
17.9	base_nrun_plikHM_TTTEEE_lowTEB_post_BAO . . . . .	531
17.10	base_nrun_plikHM_TTTEEE_lowTEB_post_JLA . . . . .	532
17.11	base_nrun_plikHM_TTTEEE_lowTEB_post_lensing . . . . .	533
17.12	base_nrun_plikHM_TTTEEE_lowTEB_post_H070p6 . . . . .	534
17.13	base_nrun_plikHM_TTTEEE_lowTEB_post_lensing_BAO_H070p6_JLA . . . . .	535
17.14	base_nrun_plikHM_TTTEEE_lowTEB_post_zre6p5 . . . . .	536
17.15	base_nrun_CamSpecHM_TT_lowTEB . . . . .	537
17.16	base_nrun_CamSpecHM_TT_lowTEB_post_BAO . . . . .	538
17.17	base_nrun_CamSpecHM_TT_lowTEB_post_JLA . . . . .	539
17.18	base_nrun_CamSpecHM_TT_lowTEB_post_lensing . . . . .	540

17.19	base_nrun_CamSpecHM.TT_lowTEB_post_H070p6 . . . . .	541
17.20	base_nrun_CamSpecHM.TT_lowTEB_post_lensing_BAO_H070p6_JLA . . . . .	542
17.21	base_nrun_CamSpecHM.TT_lowTEB_post_zre6p5 . . . . .	543
17.22	base_nrun_CamSpecHM.TTTEEE_lowTEB . . . . .	544
17.23	base_nrun_CamSpecHM.TTTEEE_lowTEB_post_BAO . . . . .	545
17.24	base_nrun_CamSpecHM.TTTEEE_lowTEB_post_JLA . . . . .	546
17.25	base_nrun_CamSpecHM.TTTEEE_lowTEB_post_lensing . . . . .	547
17.26	base_nrun_CamSpecHM.TTTEEE_lowTEB_post_H070p6 . . . . .	548
17.27	base_nrun_CamSpecHM.TTTEEE_lowTEB_post_lensing_BAO_H070p6_JLA . . . . .	549
17.28	base_nrun_CamSpecHM.TTTEEE_lowTEB_post_zre6p5 . . . . .	550
17.29	base_nrun_plikHM.TE_lowTEB . . . . .	551
17.30	base_nrun_plikHM.EE_lowTEB . . . . .	552
17.31	base_nrun_CamSpecHM.TE_lowTEB . . . . .	553
17.32	base_nrun_CamSpecHM.EE_lowTEB . . . . .	554
17.33	base_nrun_plikHM.TE_lowEB . . . . .	555
17.34	base_nrun_plikHM.EE_lowEB . . . . .	556
17.35	base_nrun_plikHM.TT_tau07 . . . . .	557
17.36	base_nrun_plikHM.TTTEEE_tau07 . . . . .	558
17.37	base_nrun_CamSpecHM.TT_tau07 . . . . .	559
<b>18</b>	<b>nrun+r</b>	<b>560</b>
18.1	base_nrun_r_plikHM.TT_lowTEB . . . . .	560
18.2	base_nrun_r_plikHM.TT_lowTEB_post_BAO . . . . .	561
18.3	base_nrun_r_plikHM.TT_lowTEB_post_JLA . . . . .	562
18.4	base_nrun_r_plikHM.TT_lowTEB_post_H070p6 . . . . .	563
18.5	base_nrun_r_plikHM.TT_lowTEB_post_zre6p5 . . . . .	564
18.6	base_nrun_r_plikHM.TTTEEE_lowTEB . . . . .	565
18.7	base_nrun_r_plikHM.TTTEEE_lowTEB_post_BAO . . . . .	567
18.8	base_nrun_r_plikHM.TTTEEE_lowTEB_post_JLA . . . . .	569
18.9	base_nrun_r_plikHM.TTTEEE_lowTEB_post_H070p6 . . . . .	570
18.10	base_nrun_r_plikHM.TTTEEE_lowTEB_post_zre6p5 . . . . .	571
18.11	base_nrun_r_CamSpecHM.TT_lowTEB . . . . .	572
18.12	base_nrun_r_CamSpecHM.TT_lowTEB_post_BAO . . . . .	573
18.13	base_nrun_r_CamSpecHM.TT_lowTEB_post_JLA . . . . .	574
18.14	base_nrun_r_CamSpecHM.TT_lowTEB_post_H070p6 . . . . .	575
18.15	base_nrun_r_CamSpecHM.TT_lowTEB_post_zre6p5 . . . . .	576
18.16	base_nrun_r_CamSpecHM.TTTEEE_lowTEB . . . . .	577
18.17	base_nrun_r_CamSpecHM.TTTEEE_lowTEB_post_BAO . . . . .	578
18.18	base_nrun_r_CamSpecHM.TTTEEE_lowTEB_post_JLA . . . . .	579
18.19	base_nrun_r_CamSpecHM.TTTEEE_lowTEB_post_H070p6 . . . . .	580
18.20	base_nrun_r_CamSpecHM.TTTEEE_lowTEB_post_zre6p5 . . . . .	581
18.21	base_nrun_r_plikHM.TT_lowTEB_lensing . . . . .	582
18.22	base_nrun_r_plikHM.TT_lowTEB_lensing_post_BAO . . . . .	583
18.23	base_nrun_r_plikHM.TT_lowTEB_lensing_post_BAO_H070p6_JLA . . . . .	584
18.24	base_nrun_r_plikHM.TT_lowTEB_lensing_post_zre6p5 . . . . .	585
18.25	base_nrun_r_plikHM.TTTEEE_lowTEB_lensing . . . . .	586
18.26	base_nrun_r_plikHM.TTTEEE_lowTEB_lensing_post_BAO . . . . .	588
18.27	base_nrun_r_plikHM.TTTEEE_lowTEB_lensing_post_BAO_H070p6_JLA . . . . .	591
18.28	base_nrun_r_plikHM.TTTEEE_lowTEB_lensing_post_zre6p5 . . . . .	593
18.29	base_nrun_r_plikHM.TT_WMAPTEB . . . . .	594

18.30	base_nrun_r_plikHM_TT_WMAPTEB_post_lensing . . . . .	595
18.31	base_nrun_r_plikHM_TT_WMAPTEB_post_BAO . . . . .	596
<b>19</b>	<b>omegak</b>	<b>597</b>
19.1	base_omegak_plikHM_TT_lowTEB . . . . .	597
19.2	base_omegak_plikHM_TTTEEE_lowTEB . . . . .	598
19.3	base_omegak_CamSpecHM_TT_lowTEB . . . . .	599
19.4	base_omegak_CamSpecHM_TT_lowTEB_post_zre6p5 . . . . .	600
19.5	base_omegak_CamSpecHM_TTTEEE_lowTEB . . . . .	601
19.6	base_omegak_CamSpecHM_TTTEEE_lowTEB_post_zre6p5 . . . . .	602
19.7	base_omegak_plikHM_TT_lowTEB_BAO . . . . .	603
19.8	base_omegak_plikHM_TT_lowTEB_BAO_post_lensing . . . . .	604
19.9	base_omegak_plikHM_TTTEEE_lowTEB_BAO . . . . .	605
19.10	base_omegak_plikHM_TTTEEE_lowTEB_BAO_post_lensing . . . . .	606
19.11	base_omegak_plikHM_TT_lowTEB_BAO_H070p6_JLA . . . . .	607
19.12	base_omegak_plikHM_TT_lowTEB_BAO_H070p6_JLA_post_lensing . . . . .	608
19.13	base_omegak_plikHM_TTTEEE_lowTEB_BAO_H070p6_JLA . . . . .	609
19.14	base_omegak_plikHM_TTTEEE_lowTEB_BAO_H070p6_JLA_post_lensing . . . . .	611
19.15	base_omegak_plikHM_TT_lowTEB_lensing . . . . .	612
19.16	base_omegak_plikHM_TTTEEE_lowTEB_lensing . . . . .	613
19.17	base_omegak_CamSpecHM_TT_lowTEB_lensing . . . . .	614
19.18	base_omegak_CamSpecHM_TTTEEE_lowTEB_lensing . . . . .	615
<b>20</b>	<b>r</b>	<b>616</b>
20.1	base_r_plikHM_TT_lowTEB . . . . .	616
20.2	base_r_plikHM_TT_lowTEB_post_BAO . . . . .	617
20.3	base_r_plikHM_TT_lowTEB_post_JLA . . . . .	618
20.4	base_r_plikHM_TT_lowTEB_post_H070p6 . . . . .	619
20.5	base_r_plikHM_TT_lowTEB_post_zre6p5 . . . . .	620
20.6	base_r_plikHM_TTTEEE_lowTEB . . . . .	621
20.7	base_r_plikHM_TTTEEE_lowTEB_post_BAO . . . . .	622
20.8	base_r_plikHM_TTTEEE_lowTEB_post_JLA . . . . .	624
20.9	base_r_plikHM_TTTEEE_lowTEB_post_H070p6 . . . . .	625
20.10	base_r_plikHM_TTTEEE_lowTEB_post_zre6p5 . . . . .	626
20.11	base_r_CamSpecHM_TT_lowTEB . . . . .	627
20.12	base_r_CamSpecHM_TT_lowTEB_post_BAO . . . . .	628
20.13	base_r_CamSpecHM_TT_lowTEB_post_JLA . . . . .	629
20.14	base_r_CamSpecHM_TT_lowTEB_post_H070p6 . . . . .	630
20.15	base_r_CamSpecHM_TT_lowTEB_post_zre6p5 . . . . .	631
20.16	base_r_CamSpecHM_TTTEEE_lowTEB . . . . .	632
20.17	base_r_CamSpecHM_TTTEEE_lowTEB_post_BAO . . . . .	633
20.18	base_r_CamSpecHM_TTTEEE_lowTEB_post_JLA . . . . .	634
20.19	base_r_CamSpecHM_TTTEEE_lowTEB_post_H070p6 . . . . .	635
20.20	base_r_CamSpecHM_TTTEEE_lowTEB_post_zre6p5 . . . . .	636
20.21	base_r_plikHM_TE_lowTEB . . . . .	637
20.22	base_r_plikHM_EE_lowTEB . . . . .	638
20.23	base_r_CamSpecHM_TE_lowTEB . . . . .	639
20.24	base_r_CamSpecHM_EE_lowTEB . . . . .	640
20.25	base_r_plikHM_TE_lowEB . . . . .	641
20.26	base_r_plikHM_EE_lowEB . . . . .	642
20.27	base_r_CamSpecHM_TE_lowEB . . . . .	643

20.28	base_r_CamSpecHM_EE_lowEB . . . . .	644
20.29	base_r_plikHM_TT_lowTEB_lensing . . . . .	645
20.30	base_r_plikHM_TT_lowTEB_lensing_post_BAO . . . . .	646
20.31	base_r_plikHM_TT_lowTEB_lensing_post_BAO_H070p6_JLA . . . . .	647
20.32	base_r_plikHM_TT_lowTEB_lensing_post_zre6p5 . . . . .	648
20.33	base_r_plikHM_TTTEEE_lowTEB_lensing . . . . .	649
20.34	base_r_plikHM_TTTEEE_lowTEB_lensing_post_BAO . . . . .	651
20.35	base_r_plikHM_TTTEEE_lowTEB_lensing_post_BAO_H070p6_JLA . . . . .	654
20.36	base_r_plikHM_TTTEEE_lowTEB_lensing_post_zre6p5 . . . . .	656
20.37	base_r_plikHM_TT_WMAPTEB . . . . .	657
20.38	base_r_plikHM_TT_WMAPTEB_post_lensing . . . . .	658
20.39	base_r_plikHM_TT_WMAPTEB_post_BAO . . . . .	659
<b>21</b>	<b>w</b>	<b>660</b>
21.1	base_w_plikHM_TT_lowTEB . . . . .	660
21.2	base_w_plikHM_TT_lowTEB_post_JLA . . . . .	661
21.3	base_w_plikHM_TT_lowTEB_post_lensing . . . . .	662
21.4	base_w_plikHM_TT_lowTEB_post_H070p6 . . . . .	663
21.5	base_w_plikHM_TT_lowTEB_post_zre6p5 . . . . .	664
21.6	base_w_plikHM_TTTEEE_lowTEB . . . . .	665
21.7	base_w_plikHM_TTTEEE_lowTEB_post_lensing . . . . .	666
21.8	base_w_plikHM_TTTEEE_lowTEB_post_H070p6 . . . . .	667
21.9	base_w_plikHM_TTTEEE_lowTEB_post_zre6p5 . . . . .	668
21.10	base_w_CamSpecHM_TT_lowTEB . . . . .	669
21.11	base_w_CamSpecHM_TT_lowTEB_post_JLA . . . . .	670
21.12	base_w_CamSpecHM_TT_lowTEB_post_lensing . . . . .	671
21.13	base_w_CamSpecHM_TT_lowTEB_post_H070p6 . . . . .	672
21.14	base_w_CamSpecHM_TT_lowTEB_post_zre6p5 . . . . .	673
21.15	base_w_CamSpecHM_TTTEEE_lowTEB . . . . .	674
21.16	base_w_CamSpecHM_TTTEEE_lowTEB_post_JLA . . . . .	675
21.17	base_w_CamSpecHM_TTTEEE_lowTEB_post_lensing . . . . .	676
21.18	base_w_CamSpecHM_TTTEEE_lowTEB_post_H070p6 . . . . .	677
21.19	base_w_CamSpecHM_TTTEEE_lowTEB_post_zre6p5 . . . . .	678
21.20	base_w_plikHM_TT_lowTEB_BAO . . . . .	679
21.21	base_w_plikHM_TT_lowTEB_BAO_post_lensing . . . . .	680
21.22	base_w_plikHM_TTTEEE_lowTEB_BAO . . . . .	681
21.23	base_w_plikHM_TTTEEE_lowTEB_BAO_post_lensing . . . . .	682
21.24	base_w_plikHM_TT_lowTEB_BAO_H070p6_JLA . . . . .	683
21.25	base_w_plikHM_TT_lowTEB_BAO_H070p6_JLA_post_lensing . . . . .	684
21.26	base_w_plikHM_TTTEEE_lowTEB_BAO_H070p6_JLA . . . . .	685
21.27	base_w_plikHM_TTTEEE_lowTEB_BAO_H070p6_JLA_post_lensing . . . . .	687
<b>22</b>	<b>w+wa</b>	<b>689</b>
22.1	base_w_wa_plikHM_TT_lowTEB_BAO . . . . .	689
22.2	base_w_wa_plikHM_TT_lowTEB_BAO_post_lensing . . . . .	690
22.3	base_w_wa_plikHM_TTTEEE_lowTEB_BAO . . . . .	691
22.4	base_w_wa_plikHM_TTTEEE_lowTEB_BAO_post_lensing . . . . .	692
22.5	base_w_wa_plikHM_TT_lowTEB_BAO_H070p6_JLA . . . . .	693
22.6	base_w_wa_plikHM_TT_lowTEB_BAO_H070p6_JLA_post_lensing . . . . .	694
22.7	base_w_wa_plikHM_TTTEEE_lowTEB_BAO_H070p6_JLA . . . . .	695
22.8	base_w_wa_plikHM_TTTEEE_lowTEB_BAO_H070p6_JLA_post_lensing . . . . .	697



<b>23</b>	<b>yhe</b>	<b>699</b>
23.1	base_yhe_plikHM.TT_lowTEB . . . . .	699
23.2	base_yhe_plikHM.TT_lowTEB_post_BAO . . . . .	700
23.3	base_yhe_plikHM.TT_lowTEB_post_JLA . . . . .	701
23.4	base_yhe_plikHM.TT_lowTEB_post_lensing . . . . .	702
23.5	base_yhe_plikHM.TT_lowTEB_post_H070p6 . . . . .	703
23.6	base_yhe_plikHM.TT_lowTEB_post_lensing_BAO_H070p6_JLA . . . . .	704
23.7	base_yhe_plikHM.TT_lowTEB_post_zre6p5 . . . . .	705
23.8	base_yhe_plikHM.TTTEEE_lowTEB . . . . .	706
23.9	base_yhe_plikHM.TTTEEE_lowTEB_post_BAO . . . . .	707
23.10	base_yhe_plikHM.TTTEEE_lowTEB_post_JLA . . . . .	708
23.11	base_yhe_plikHM.TTTEEE_lowTEB_post_lensing . . . . .	709
23.12	base_yhe_plikHM.TTTEEE_lowTEB_post_H070p6 . . . . .	710
23.13	base_yhe_plikHM.TTTEEE_lowTEB_post_lensing_BAO_H070p6_JLA . . . . .	711
23.14	base_yhe_plikHM.TTTEEE_lowTEB_post_zre6p5 . . . . .	712
23.15	base_yhe_CamSpecHM.TT_lowTEB . . . . .	713
23.16	base_yhe_CamSpecHM.TT_lowTEB_post_BAO . . . . .	714
23.17	base_yhe_CamSpecHM.TT_lowTEB_post_JLA . . . . .	715
23.18	base_yhe_CamSpecHM.TT_lowTEB_post_lensing . . . . .	716
23.19	base_yhe_CamSpecHM.TT_lowTEB_post_H070p6 . . . . .	717
23.20	base_yhe_CamSpecHM.TT_lowTEB_post_lensing_BAO_H070p6_JLA . . . . .	718
23.21	base_yhe_CamSpecHM.TT_lowTEB_post_zre6p5 . . . . .	719
23.22	base_yhe_CamSpecHM.TTTEEE_lowTEB . . . . .	720
23.23	base_yhe_CamSpecHM.TTTEEE_lowTEB_post_BAO . . . . .	721
23.24	base_yhe_CamSpecHM.TTTEEE_lowTEB_post_JLA . . . . .	722
23.25	base_yhe_CamSpecHM.TTTEEE_lowTEB_post_lensing . . . . .	723
23.26	base_yhe_CamSpecHM.TTTEEE_lowTEB_post_H070p6 . . . . .	724
23.27	base_yhe_CamSpecHM.TTTEEE_lowTEB_post_lensing_BAO_H070p6_JLA . . . . .	725
23.28	base_yhe_CamSpecHM.TTTEEE_lowTEB_post_zre6p5 . . . . .	726
23.29	base_yhe_plikHM.TE_lowTEB . . . . .	727
23.30	base_yhe_plikHM.EE_lowTEB . . . . .	728
23.31	base_yhe_CamSpecHM.TE_lowTEB . . . . .	729
23.32	base_yhe_CamSpecHM.EE_lowTEB . . . . .	730
23.33	base_yhe_plikHM.TE_lowEB . . . . .	731
23.34	base_yhe_plikHM.EE_lowEB . . . . .	732
23.35	base_yhe_CamSpecDS.TT_lowTEB . . . . .	733
23.36	base_yhe_plikDS.TT_lowTEB . . . . .	734
23.37	base_yhe_plikHM.TT_WMAPTEB . . . . .	735
23.38	base_yhe_plikHM.TT_WMAPTEB_post_lensing . . . . .	736
23.39	base_yhe_plikHM.TT_WMAPTEB_post_BAO . . . . .	737

## 2 Baseline model

### 2.1 base\_plikHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022242	$0.02222^{+0.00045}_{-0.00043}$	$\Omega_m$	0.3149	$0.315^{+0.027}_{-0.025}$	$100\theta_*$	1.04106	$1.04105^{+0.00088}_{-0.00090}$
$\Omega_c h^2$	0.11977	$0.1197^{+0.0043}_{-0.0042}$	$\Omega_m h^2$	0.14266	$0.1426^{+0.0040}_{-0.0040}$	$D_A/\text{Gpc}$	13.889	$13.891^{+0.089}_{-0.090}$
$100\theta_{\text{MC}}$	1.04086	$1.04085^{+0.00090}_{-0.00091}$	$\Omega_m h^3$	0.09602	$0.09597^{+0.00090}_{-0.00089}$	$z_{\text{drag}}$	1059.63	$1059.57^{+0.93}_{-0.89}$
$\tau$	0.0781	$0.078^{+0.038}_{-0.036}$	$\sigma_8$	0.8301	$0.829^{+0.028}_{-0.028}$	$r_{\text{drag}}$	147.29	$147.33^{+0.96}_{-0.96}$
$\ln(10^{10} A_s)$	3.090	$3.089^{+0.072}_{-0.069}$	$\sigma_8 \Omega_m^{0.5}$	0.4658	$0.466^{+0.026}_{-0.025}$	$k_D$	0.14055	$0.1405^{+0.0010}_{-0.0010}$
$n_s$	0.9658	$0.966^{+0.012}_{-0.012}$	$\sigma_8 \Omega_m^{0.25}$	0.6218	$0.621^{+0.025}_{-0.025}$	$100\theta_D$	0.16093	$0.16097^{+0.00052}_{-0.00052}$
$y_{\text{cal}}$	1.00030	$1.0004^{+0.0049}_{-0.0048}$	$\sigma_8/h^{0.5}$	1.0118	$1.011^{+0.038}_{-0.037}$	$z_{\text{eq}}$	3394	$3393^{+97}_{-96}$
$A_{217}^{\text{CIB}}$	66.6	$64^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.499	$2.499^{+0.088}_{-0.088}$	$k_{\text{eq}}$	0.010358	$0.01035^{+0.00029}_{-0.00029}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.05	—	$z_{\text{re}}$	9.999	$9.9^{+3.4}_{-3.4}$	$100\theta_{\text{eq}}$	0.8144	$0.815^{+0.018}_{-0.018}$
$A_{143}^{\text{tSZ}}$	7.14	$5.2^{+3.6}_{-3.7}$	$10^9 A_s$	2.199	$2.20^{+0.16}_{-0.15}$	$100\theta_{s,\text{eq}}$	0.4501	$0.4502^{+0.0094}_{-0.0092}$
$A_{100}^{\text{PS}}$	252	$257^{+50}_{-50}$	$10^9 A_s e^{-2\tau}$	1.8804	$1.880^{+0.027}_{-0.027}$	$r_{\text{drag}}/D_V(0.57)$	0.07139	$0.0714^{+0.0015}_{-0.0014}$
$A_{143}^{\text{PS}}$	39.2	$44^{+20}_{-20}$	$D_{40}$	1235.8	$1237^{+29}_{-29}$	$H(0.57)$	92.88	$92.88^{+0.83}_{-0.76}$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$D_{220}$	5716	$5717^{+82}_{-78}$	$D_A(0.57)$	1391.6	$1392^{+25}_{-25}$
$A_{217}^{\text{PS}}$	97.8	$97^{+20}_{-20}$	$D_{810}$	2534.5	$2534^{+27}_{-26}$	$F_{\text{AP}}(0.57)$	0.6769	$0.6769^{+0.0067}_{-0.0065}$
$A^{\text{kSZ}}$	0.00	$< 8.25$	$D_{1420}$	814.9	$814^{+10}_{-9.6}$	$f\sigma_8(0.57)$	0.4835	$0.483^{+0.018}_{-0.018}$
$A_{100}^{\text{dustTT}}$	7.41	$7.4^{+3.7}_{-3.7}$	$D_{2000}$	230.49	$230.3^{+3.8}_{-3.5}$	$\sigma_8(0.57)$	0.6167	$0.616^{+0.022}_{-0.021}$
$A_{143}^{\text{dustTT}}$	8.98	$8.9^{+3.6}_{-3.6}$	$n_{s,0.002}$	0.9658	$0.966^{+0.012}_{-0.012}$	$f_{2000}^{143}$	29.5	$30^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.1^{+8.2}_{-8.1}$	$Y_{\text{P}}$	0.245336	$0.24532^{+0.00020}_{-0.00019}$	$f_{2000}^{143 \times 217}$	32.15	$32^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	0.246663	$0.24665^{+0.00020}_{-0.00019}$	$f_{2000}^{217}$	105.77	$106.0^{+3.9}_{-4.0}$
$c_{100}$	0.99789	$0.9979^{+0.0015}_{-0.0015}$	$10^5 \text{D}/\text{H}$	2.616	$2.620^{+0.083}_{-0.085}$	$\chi_{\text{lowTEB}}^2$	10496.47	$10497.4 (\nu: 2.5)$
$c_{217}$	0.99593	$0.9959^{+0.0029}_{-0.0029}$	$\text{Age}/\text{Gyr}$	13.811	$13.813^{+0.071}_{-0.075}$	$\chi_{\text{plik}}^2$	763.4	$777.1 (\nu: 16.1)$
$H_0$	67.31	$67.3^{+1.9}_{-1.8}$	$z_*$	1090.06	$1090.09^{+0.81}_{-0.84}$	$\chi_{\text{prior}}^2$	2.1	$7.3 (\nu: 6.4)$
$\Omega_\Lambda$	0.6851	$0.685^{+0.025}_{-0.027}$	$r_*$	144.59	$144.61^{+0.96}_{-0.96}$	$\chi_{\text{CMB}}^2$	11259.8	$11274.5 (\nu: 15.2)$

Best-fit  $\chi_{\text{eff}}^2 = 11261.93$ ;  $\bar{\chi}_{\text{eff}}^2 = 11281.82$ ;  $R - 1 = 0.01034$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.47 plik\_dx11dr2\_HM\_v18\_TT: 763.37

## 2.2 base\_plikHM\_TT\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022290	$0.02226^{+0.00040}_{-0.00039}$	$\Omega_m h^3$	0.09603	$0.09597^{+0.00090}_{-0.00087}$	$k_D$	0.14044	$0.14038^{+0.00086}_{-0.00086}$
$\Omega_c h^2$	0.11901	$0.1190^{+0.0025}_{-0.0025}$	$\sigma_8$	0.8295	$0.829^{+0.028}_{-0.027}$	$100\theta_D$	0.16091	$0.16094^{+0.00051}_{-0.00050}$
$100\theta_{MC}$	1.04098	$1.04095^{+0.00079}_{-0.00080}$	$\sigma_8 \Omega_m^{0.5}$	0.4619	$0.462^{+0.019}_{-0.019}$	$z_{eq}$	3377	$3376^{+56}_{-58}$
$\tau$	0.0809	$0.080^{+0.035}_{-0.034}$	$\sigma_8 \Omega_m^{0.25}$	0.6190	$0.619^{+0.022}_{-0.022}$	$k_{eq}$	0.010306	$0.01030^{+0.00017}_{-0.00018}$
$\ln(10^{10} A_s)$	3.094	$3.093^{+0.069}_{-0.066}$	$\sigma_8/h^{0.5}$	1.0084	$1.008^{+0.035}_{-0.035}$	$100\theta_{eq}$	0.8177	$0.818^{+0.011}_{-0.010}$
$n_s$	0.9675	$0.9673^{+0.0090}_{-0.0088}$	$\langle d^2 \rangle^{1/2}$	2.492	$2.492^{+0.086}_{-0.082}$	$100\theta_{s,eq}$	0.4517	$0.4518^{+0.0056}_{-0.0054}$
$y_{cal}$	1.00027	$1.0004^{+0.0049}_{-0.0049}$	$z_{re}$	10.22	$10.1^{+3.2}_{-3.1}$	$r_{drag}/D_V(0.57)$	0.07166	$0.07165^{+0.00086}_{-0.00081}$
$A_{217}^{CIB}$	66.7	$64^{+10}_{-10}$	$10^9 A_s$	2.207	$2.21^{+0.16}_{-0.14}$	$H(0.57)$	93.02	$93.00^{+0.55}_{-0.52}$
$\xi^{tSZ \times CIB}$	0.05	—	$10^9 A_s e^{-2\tau}$	1.8772	$1.877^{+0.022}_{-0.022}$	$D_A(0.57)$	1387.0	$1388^{+15}_{-15}$
$A_{143}^{tSZ}$	7.16	$5.2^{+3.6}_{-3.8}$	$D_{40}$	1233.4	$1234^{+26}_{-26}$	$F_{AP}(0.57)$	0.67568	$0.6758^{+0.0038}_{-0.0039}$
$A_{100}^{PS}$	252	$257^{+60}_{-50}$	$D_{220}$	5720	$5719^{+79}_{-78}$	$f\sigma_8(0.57)$	0.4819	$0.482^{+0.017}_{-0.017}$
$A_{143}^{PS}$	39.0	$43^{+20}_{-20}$	$D_{810}$	2533.7	$2533^{+27}_{-26}$	$\sigma_8(0.57)$	0.6174	$0.617^{+0.021}_{-0.020}$
$A_{143 \times 217}^{PS}$	33	$39^{+20}_{-20}$	$D_{1420}$	815.1	$814.8^{+9.9}_{-9.7}$	$f_{2000}^{143}$	29.4	$30^{+6}_{-6}$
$A_{217}^{PS}$	97.2	$97^{+20}_{-20}$	$D_{2000}$	230.63	$230.5^{+3.6}_{-3.3}$	$f_{2000}^{143 \times 217}$	31.99	$32^{+4}_{-4}$
$A^{kSZ}$	0.01	$< 8.16$	$n_{s,0.002}$	0.9675	$0.9673^{+0.0090}_{-0.0088}$	$f_{2000}^{217}$	105.58	$105.8^{+3.9}_{-4.0}$
$A_{100}^{dustTT}$	7.29	$7.4^{+3.6}_{-3.7}$	$Y_P$	0.245357	$0.24534^{+0.00018}_{-0.00018}$	$\chi_{lowTEB}^2$	10496.42	10497.1 ( $\nu$ : 2.6)
$A_{143}^{dustTT}$	8.99	$9.0^{+3.8}_{-3.7}$	$Y_P^{BBN}$	0.246684	$0.24667^{+0.00018}_{-0.00018}$	$\chi_{plik}^2$	763.6	776.8 ( $\nu$ : 16.1)
$A_{143 \times 217}^{dustTT}$	17.6	$17.1^{+8.1}_{-8.1}$	$10^5 D/H$	2.607	$2.612^{+0.075}_{-0.074}$	$\chi_{6DF}^2$	0.023	0.064 ( $\nu$ : 0.0)
$A_{217}^{dustTT}$	82.1	$82^{+10}_{-10}$	Age/Gyr	13.800	$13.803^{+0.054}_{-0.056}$	$\chi_{MGS}^2$	1.28	1.33 ( $\nu$ : 0.1)
$c_{100}$	0.99789	$0.9979^{+0.0016}_{-0.0016}$	$z_*$	1089.93	$1089.97^{+0.59}_{-0.59}$	$\chi_{DR11CMass}^2$	2.45	2.91 ( $\nu$ : 0.2)
$c_{217}$	0.99588	$0.9959^{+0.0028}_{-0.0029}$	$r_*$	144.75	$144.77^{+0.63}_{-0.61}$	$\chi_{DR11LOWZ}^2$	0.61	0.77 ( $\nu$ : 0.2)
$H_0$	67.65	$67.6^{+1.1}_{-1.1}$	$100\theta_*$	1.04117	$1.04114^{+0.00078}_{-0.00079}$	$\chi_{prior}^2$	2.0	7.3 ( $\nu$ : 6.5)
$\Omega_\Lambda$	0.6899	$0.690^{+0.015}_{-0.015}$	$D_A/Gpc$	13.902	$13.905^{+0.061}_{-0.061}$	$\chi_{CMB}^2$	11260.0	11274.0 ( $\nu$ : 14.8)
$\Omega_m$	0.3101	$0.310^{+0.015}_{-0.015}$	$z_{drag}$	1059.67	$1059.62^{+0.89}_{-0.87}$	$\chi_{BAO}^2$	4.37	5.1 ( $\nu$ : 0.5)
$\Omega_m h^2$	0.14195	$0.1419^{+0.0024}_{-0.0024}$	$r_{drag}$	147.44	$147.47^{+0.67}_{-0.68}$			

Best-fit  $\chi_{eff}^2 = 11266.44$ ;  $\bar{\chi}_{eff}^2 = 11286.37$ ;  $R - 1 = 0.01395$

$\chi_{eff}^2$ : BAO - 6DF: 0.02 MGS: 1.28 DR11CMass: 2.45 DR11LOWZ: 0.61 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.42 plik\_dx11dr2\_HM\_v18\_TT: 763.60

### 2.3 base\_plikHM\_TT\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022270	$0.02225^{+0.00045}_{-0.00042}$	$\Omega_m h^2$	0.14222	$0.1422^{+0.0038}_{-0.0036}$	$z_{\text{drag}}$	1059.67	$1059.61^{+0.94}_{-0.90}$
$\Omega_c h^2$	0.11930	$0.1193^{+0.0040}_{-0.0038}$	$\Omega_m h^3$	0.09601	$0.09598^{+0.00090}_{-0.00087}$	$r_{\text{drag}}$	147.39	$147.41^{+0.89}_{-0.92}$
$100\theta_{\text{MC}}$	1.04091	$1.04090^{+0.00086}_{-0.00090}$	$\sigma_8$	0.8301	$0.829^{+0.028}_{-0.027}$	$k_{\text{D}}$	0.14048	$0.1404^{+0.0010}_{-0.00099}$
$\tau$	0.0804	$0.079^{+0.037}_{-0.036}$	$\sigma_8 \Omega_m^{0.5}$	0.4637	$0.463^{+0.025}_{-0.024}$	$100\theta_{\text{D}}$	0.16092	$0.16095^{+0.00052}_{-0.00051}$
$\ln(10^{10} A_s)$	3.094	$3.092^{+0.071}_{-0.069}$	$\sigma_8 \Omega_m^{0.25}$	0.6204	$0.620^{+0.025}_{-0.025}$	$z_{\text{eq}}$	3383	$3383^{+91}_{-87}$
$n_s$	0.9670	$0.967^{+0.012}_{-0.011}$	$\sigma_8/h^{0.5}$	1.0103	$1.009^{+0.037}_{-0.036}$	$k_{\text{eq}}$	0.010326	$0.01033^{+0.00028}_{-0.00026}$
$y_{\text{cal}}$	1.00026	$1.0004^{+0.0049}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.496	$2.495^{+0.088}_{-0.087}$	$100\theta_{\text{eq}}$	0.8164	$0.816^{+0.017}_{-0.017}$
$A_{217}^{\text{CIB}}$	66.9	$64^{+10}_{-10}$	$z_{\text{re}}$	10.19	$10.0^{+3.3}_{-3.3}$	$100\theta_{\text{s,eq}}$	0.4511	$0.4511^{+0.0086}_{-0.0086}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.04	—	$10^9 A_s$	2.206	$2.20^{+0.16}_{-0.15}$	$r_{\text{drag}}/D_V(0.57)$	0.07155	$0.0716^{+0.0013}_{-0.0013}$
$A_{143}^{\text{tSZ}}$	7.23	$5.2^{+3.6}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8781	$1.879^{+0.026}_{-0.026}$	$H(0.57)$	92.96	$92.95^{+0.79}_{-0.73}$
$A_{100}^{\text{PS}}$	252	$257^{+50}_{-50}$	$D_{40}$	1233.9	$1236^{+28}_{-28}$	$D_A(0.57)$	1388.9	$1389^{+23}_{-23}$
$A_{143}^{\text{PS}}$	38.3	$43^{+20}_{-20}$	$D_{220}$	5717	$5719^{+81}_{-78}$	$F_{\text{AP}}(0.57)$	0.6762	$0.6762^{+0.0062}_{-0.0059}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{810}$	2533.6	$2534^{+27}_{-26}$	$f\sigma_8(0.57)$	0.4828	$0.482^{+0.018}_{-0.018}$
$A_{217}^{\text{PS}}$	97.3	$97^{+20}_{-20}$	$D_{1420}$	814.9	$815^{+10}_{-9.6}$	$\sigma_8(0.57)$	0.6174	$0.617^{+0.022}_{-0.021}$
$A^{\text{kSZ}}$	0.00	$< 8.22$	$D_{2000}$	230.57	$230.4^{+3.7}_{-3.5}$	$f_{2000}^{143}$	29.3	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.44	$7.4^{+3.6}_{-3.6}$	$n_{\text{s},0.002}$	0.9670	$0.967^{+0.012}_{-0.011}$	$f_{2000}^{143 \times 217}$	32.03	$32^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.08	$9.0^{+3.7}_{-3.6}$	$Y_{\text{P}}$	0.245349	$0.24534^{+0.00020}_{-0.00019}$	$f_{2000}^{217}$	105.70	$105.9^{+3.9}_{-4.1}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.0^{+8.1}_{-8.1}$	$Y_{\text{P}}^{\text{BBN}}$	0.246675	$0.24666^{+0.00020}_{-0.00019}$	$\chi_{\text{lowTEB}}^2$	10496.45	$10497.3 (\nu: 2.6)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	2.610	$2.614^{+0.082}_{-0.084}$	$\chi_{\text{plik}}^2$	763.4	$777.1 (\nu: 16.4)$
$c_{100}$	0.99790	$0.9979^{+0.0016}_{-0.0016}$	Age/Gyr	13.805	$13.807^{+0.069}_{-0.072}$	$\chi_{\text{JLA}}^2$	706.76	$706.90 (\nu: 0.1)$
$c_{217}$	0.99592	$0.9959^{+0.0029}_{-0.0029}$	$z_*$	1089.99	$1090.01^{+0.78}_{-0.80}$	$\chi_{\text{prior}}^2$	2.1	$7.3 (\nu: 6.3)$
$H_0$	67.51	$67.5^{+1.7}_{-1.7}$	$r_*$	144.69	$144.70^{+0.88}_{-0.91}$	$\chi_{\text{CMB}}^2$	11259.9	$11274.4 (\nu: 15.1)$
$\Omega_{\Lambda}$	0.6880	$0.688^{+0.023}_{-0.025}$	$100\theta_*$	1.04110	$1.04110^{+0.00085}_{-0.00090}$			
$\Omega_{\text{m}}$	0.3120	$0.312^{+0.025}_{-0.023}$	$D_{\text{A}}/\text{Gpc}$	13.898	$13.899^{+0.082}_{-0.084}$			

Best-fit  $\chi_{\text{eff}}^2 = 11968.74$ ;  $\bar{\chi}_{\text{eff}}^2 = 11988.60$ ;  $R - 1 = 0.01407$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.44 plik\_dx11dr2\_HM\_v18\_TT: 763.42 SN - JLA December\_2013: 706.76

## 2.4 base\_plikHM\_TT\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022292	$0.02226^{+0.00045}_{-0.00043}$	$\Omega_m h^2$	0.14217	$0.1421^{+0.0039}_{-0.0037}$	$z_{\text{drag}}$	1059.70	$1059.63^{+0.92}_{-0.88}$
$\Omega_c h^2$	0.11923	$0.1192^{+0.0041}_{-0.0040}$	$\Omega_m h^3$	0.09607	$0.09599^{+0.00089}_{-0.00088}$	$r_{\text{drag}}$	147.38	$147.42^{+0.91}_{-0.95}$
$100\theta_{\text{MC}}$	1.04096	$1.04093^{+0.00086}_{-0.00091}$	$\sigma_8$	0.8294	$0.829^{+0.028}_{-0.027}$	$k_{\text{D}}$	0.14050	$0.1404^{+0.0010}_{-0.0010}$
$\tau$	0.0798	$0.080^{+0.037}_{-0.036}$	$\sigma_8 \Omega_m^{0.5}$	0.4628	$0.463^{+0.025}_{-0.025}$	$100\theta_{\text{D}}$	0.16090	$0.16094^{+0.00052}_{-0.00051}$
$\ln(10^{10} A_s)$	3.092	$3.092^{+0.071}_{-0.069}$	$\sigma_8 \Omega_m^{0.25}$	0.6196	$0.620^{+0.025}_{-0.025}$	$z_{\text{eq}}$	3382	$3381^{+94}_{-90}$
$n_s$	0.9673	$0.967^{+0.012}_{-0.012}$	$\sigma_8/h^{0.5}$	1.0090	$1.009^{+0.037}_{-0.037}$	$k_{\text{eq}}$	0.010322	$0.01032^{+0.00029}_{-0.00027}$
$y_{\text{cal}}$	1.00030	$1.0004^{+0.0050}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.493	$2.494^{+0.089}_{-0.087}$	$100\theta_{\text{eq}}$	0.8167	$0.817^{+0.018}_{-0.017}$
$A_{217}^{\text{CIB}}$	66.3	$64^{+10}_{-10}$	$z_{\text{re}}$	10.12	$10.1^{+3.3}_{-3.4}$	$100\theta_{\text{s,eq}}$	0.4512	$0.4513^{+0.0090}_{-0.0089}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.09	—	$10^9 A_s$	2.203	$2.20^{+0.16}_{-0.15}$	$r_{\text{drag}}/D_V(0.57)$	0.07159	$0.0716^{+0.0014}_{-0.0014}$
$A_{143}^{\text{tSZ}}$	7.08	$5.2^{+3.6}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8783	$1.878^{+0.027}_{-0.027}$	$H(0.57)$	93.00	$92.98^{+0.80}_{-0.75}$
$A_{100}^{\text{PS}}$	252	$257^{+50}_{-50}$	$D_{40}$	1233.5	$1235^{+29}_{-29}$	$D_A(0.57)$	1388.1	$1389^{+24}_{-24}$
$A_{143}^{\text{PS}}$	39.4	$43^{+20}_{-20}$	$D_{220}$	5719	$5719^{+81}_{-78}$	$F_{\text{AP}}(0.57)$	0.6760	$0.6761^{+0.0064}_{-0.0062}$
$A_{143 \times 217}^{\text{PS}}$	35	$39^{+20}_{-20}$	$D_{810}$	2534.4	$2534^{+27}_{-26}$	$f\sigma_8(0.57)$	0.4822	$0.482^{+0.018}_{-0.018}$
$A_{217}^{\text{PS}}$	98.2	$97^{+20}_{-20}$	$D_{1420}$	815.4	$815^{+10}_{-9.6}$	$\sigma_8(0.57)$	0.6170	$0.617^{+0.022}_{-0.021}$
$A^{\text{kSZ}}$	0.00	$< 8.21$	$D_{2000}$	230.73	$230.5^{+3.7}_{-3.5}$	$f_{2000}^{143}$	29.2	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.42	$7.4^{+3.6}_{-3.6}$	$n_{\text{s},0.002}$	0.9673	$0.967^{+0.012}_{-0.012}$	$f_{2000}^{143 \times 217}$	31.94	$32^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.04	$9.0^{+3.7}_{-3.6}$	$Y_{\text{P}}$	0.245359	$0.24534^{+0.00020}_{-0.00020}$	$f_{2000}^{217}$	105.58	$105.8^{+3.9}_{-4.1}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.0^{+8.1}_{-8.1}$	$Y_{\text{P}}^{\text{BBN}}$	0.246685	$0.24667^{+0.00020}_{-0.00020}$	$\chi_{\text{lowTEB}}^2$	10496.32	$10497.3 (\nu: 2.7)$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	2.606	$2.612^{+0.083}_{-0.084}$	$\chi_{\text{plik}}^2$	763.7	$777.2 (\nu: 16.6)$
$c_{100}$	0.99790	$0.9979^{+0.0016}_{-0.0016}$	Age/Gyr	13.801	$13.805^{+0.071}_{-0.073}$	$\chi_{\text{H070p6}}^2$	0.83	$0.91 (\nu: 0.1)$
$c_{217}$	0.99588	$0.9959^{+0.0029}_{-0.0029}$	$z_*$	1089.95	$1089.99^{+0.80}_{-0.81}$	$\chi_{\text{prior}}^2$	2.0	$7.3 (\nu: 6.3)$
$H_0$	67.57	$67.5^{+1.8}_{-1.8}$	$r_*$	144.69	$144.72^{+0.92}_{-0.94}$	$\chi_{\text{CMB}}^2$	11260.0	$11274.5 (\nu: 15.3)$
$\Omega_{\Lambda}$	0.6886	$0.688^{+0.024}_{-0.026}$	$100\theta_*$	1.04115	$1.04112^{+0.00085}_{-0.00090}$			
$\Omega_m$	0.3114	$0.312^{+0.026}_{-0.024}$	$D_{\text{A}}/\text{Gpc}$	13.897	$13.900^{+0.084}_{-0.087}$			

Best-fit  $\chi_{\text{eff}}^2 = 11262.82$ ;  $\bar{\chi}_{\text{eff}}^2 = 11282.70$ ;  $R - 1 = 0.01476$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.32 plik\_dx11dr2\_HM\_v18\_TT: 763.66 Hubble - H070p6: 0.83

## 2.5 base\_plikHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02223^{+0.00045}_{-0.00043}$	$\Omega_m$	$0.315^{+0.026}_{-0.025}$	$100\theta_*$	$1.04106^{+0.00086}_{-0.00089}$
$\Omega_c h^2$	$0.1197^{+0.0042}_{-0.0041}$	$\Omega_m h^2$	$0.1426^{+0.0040}_{-0.0039}$	$D_A/\text{Gpc}$	$13.892^{+0.086}_{-0.090}$
$100\theta_{\text{MC}}$	$1.04086^{+0.00089}_{-0.00091}$	$\Omega_m h^3$	$0.09598^{+0.00090}_{-0.00087}$	$z_{\text{drag}}$	$1059.58^{+0.92}_{-0.87}$
$\tau$	$0.079^{+0.035}_{-0.034}$	$\sigma_8$	$0.830^{+0.027}_{-0.025}$	$r_{\text{drag}}$	$147.33^{+0.92}_{-0.95}$
$\ln(10^{10} A_s)$	$3.091^{+0.066}_{-0.065}$	$\sigma_8 \Omega_m^{0.5}$	$0.466^{+0.026}_{-0.025}$	$k_D$	$0.1405^{+0.0010}_{-0.0010}$
$n_s$	$0.966^{+0.012}_{-0.011}$	$\sigma_8 \Omega_m^{0.25}$	$0.622^{+0.026}_{-0.024}$	$100\theta_D$	$0.16096^{+0.00052}_{-0.00051}$
$y_{\text{cal}}$	$1.0004^{+0.0050}_{-0.0048}$	$\sigma_8/h^{0.5}$	$1.012^{+0.038}_{-0.035}$	$z_{\text{eq}}$	$3392^{+95}_{-92}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	$2.500^{+0.087}_{-0.084}$	$k_{\text{eq}}$	$0.01035^{+0.00029}_{-0.00028}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$z_{\text{re}}$	$10.0^{+2.9}_{-3.2}$	$100\theta_{\text{eq}}$	$0.815^{+0.018}_{-0.017}$
$A_{143}^{\text{tSZ}}$	$5.2^{+3.6}_{-3.8}$	$10^9 A_s$	$2.20^{+0.15}_{-0.14}$	$100\theta_{s,\text{eq}}$	$0.4503^{+0.0090}_{-0.0090}$
$A_{100}^{\text{PS}}$	$257^{+50}_{-50}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.027}_{-0.027}$	$r_{\text{drag}}/D_V(0.57)$	$0.0714^{+0.0014}_{-0.0014}$
$A_{143}^{\text{PS}}$	$44^{+20}_{-20}$	$D_{40}$	$1237^{+29}_{-29}$	$H(0.57)$	$92.89^{+0.82}_{-0.75}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$D_{220}$	$5717^{+81}_{-78}$	$D_A(0.57)$	$1391^{+24}_{-25}$
$A_{217}^{\text{PS}}$	$97^{+20}_{-20}$	$D_{810}$	$2534^{+27}_{-26}$	$F_{\text{AP}}(0.57)$	$0.6768^{+0.0065}_{-0.0063}$
$A^{\text{kSZ}}$	$< 8.21$	$D_{1420}$	$814^{+10}_{-9.5}$	$f\sigma_8(0.57)$	$0.483^{+0.018}_{-0.017}$
$A_{100}^{\text{dustTT}}$	$7.4^{+3.6}_{-3.6}$	$D_{2000}$	$230.3^{+3.8}_{-3.5}$	$\sigma_8(0.57)$	$0.617^{+0.020}_{-0.020}$
$A_{143}^{\text{dustTT}}$	$9.0^{+3.7}_{-3.6}$	$n_{s,0.002}$	$0.966^{+0.012}_{-0.011}$	$f_{2000}^{143}$	$30^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.0^{+8.2}_{-8.1}$	$Y_{\text{P}}$	$0.24533^{+0.00020}_{-0.00019}$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24665^{+0.00020}_{-0.00020}$	$f_{2000}^{217}$	$105.9^{+3.9}_{-4.1}$
$c_{100}$	$0.9979^{+0.0015}_{-0.0016}$	$10^5 \text{D}/\text{H}$	$2.619^{+0.083}_{-0.085}$	$\chi_{\text{lowTEB}}^2$	$10497.3 (\nu: 2.5)$
$c_{217}$	$0.9959^{+0.0029}_{-0.0029}$	$\text{Age}/\text{Gyr}$	$13.812^{+0.071}_{-0.074}$	$\chi_{\text{plik}}^2$	$777.0 (\nu: 15.8)$
$H_0$	$67.3^{+1.8}_{-1.8}$	$z_*$	$1090.08^{+0.79}_{-0.84}$	$\chi_{\text{prior}}^2$	$7.3 (\nu: 6.2)$
$\Omega_\Lambda$	$0.685^{+0.025}_{-0.026}$	$r_*$	$144.62^{+0.93}_{-0.95}$	$\chi_{\text{CMB}}^2$	$11274.4 (\nu: 14.8)$

$$\bar{\chi}_{\text{eff}}^2 = 11281.64; R - 1 = 0.01217$$

## 2.6 base\_plikHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022252	$0.02225^{+0.00032}_{-0.00030}$	$A_{100 \times 217}^{\text{dustTE}}$	0.307	$0.30^{+0.17}_{-0.17}$	$10^5 \text{D/H}$	2.614	$2.614^{+0.057}_{-0.060}$
$\Omega_c h^2$	0.11987	$0.1198^{+0.0029}_{-0.0029}$	$A_{143}^{\text{dustTE}}$	0.155	$0.15^{+0.11}_{-0.10}$	Age/Gyr	13.813	$13.813^{+0.051}_{-0.052}$
$100\theta_{\text{MC}}$	1.04078	$1.04077^{+0.00064}_{-0.00063}$	$A_{143 \times 217}^{\text{dustTE}}$	0.338	$0.34^{+0.16}_{-0.16}$	$z_*$	1090.06	$1090.06^{+0.58}_{-0.58}$
$\tau$	0.0789	$0.079^{+0.034}_{-0.034}$	$A_{217}^{\text{dustTE}}$	1.667	$1.67^{+0.50}_{-0.49}$	$r_*$	144.56	$144.57^{+0.62}_{-0.63}$
$\ln(10^{10} A_s)$	3.093	$3.094^{+0.066}_{-0.066}$	$c_{100}$	0.99818	$0.9982^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04097	$1.04096^{+0.00063}_{-0.00061}$
$n_s$	0.9648	$0.9645^{+0.0098}_{-0.0096}$	$c_{217}$	0.99598	$0.9960^{+0.0028}_{-0.0028}$	$D_A/\text{Gpc}$	13.887	$13.888^{+0.057}_{-0.059}$
$y_{\text{cal}}$	1.00029	$1.0004^{+0.0049}_{-0.0049}$	$H_0$	67.25	$67.3^{+1.3}_{-1.3}$	$z_{\text{drag}}$	1059.67	$1059.65^{+0.63}_{-0.59}$
$A_{217}^{\text{CIB}}$	66.4	$64^{+10}_{-10}$	$\Omega_\Lambda$	0.6844	$0.684^{+0.017}_{-0.018}$	$r_{\text{drag}}$	147.26	$147.27^{+0.61}_{-0.62}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.13	—	$\Omega_m$	0.3156	$0.316^{+0.018}_{-0.017}$	$k_D$	0.14060	$0.14059^{+0.00064}_{-0.00064}$
$A_{143}^{\text{tSZ}}$	7.17	$5.4^{+3.6}_{-3.8}$	$\Omega_m h^2$	0.14276	$0.1427^{+0.0027}_{-0.0027}$	$100\theta_D$	0.160904	$0.16091^{+0.00035}_{-0.00036}$
$A_{100}^{\text{PS}}$	255	$260^{+50}_{-50}$	$\Omega_m h^3$	0.09601	$0.09601^{+0.00058}_{-0.00056}$	$z_{\text{eq}}$	3396	$3395^{+66}_{-64}$
$A_{143}^{\text{PS}}$	40.1	$43^{+10}_{-20}$	$\sigma_8$	0.8310	$0.831^{+0.026}_{-0.026}$	$k_{\text{eq}}$	0.010365	$0.01036^{+0.00020}_{-0.00019}$
$A_{143 \times 217}^{\text{PS}}$	36.4	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4668	$0.467^{+0.019}_{-0.019}$	$100\theta_{\text{eq}}$	0.8139	$0.814^{+0.012}_{-0.012}$
$A_{217}^{\text{PS}}$	98.7	$98^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6228	$0.623^{+0.021}_{-0.021}$	$100\theta_{s,\text{eq}}$	0.4498	$0.4499^{+0.0063}_{-0.0063}$
$A^{\text{kSZ}}$	0.00	$< 7.81$	$\sigma_8/h^{0.5}$	1.0133	$1.013^{+0.033}_{-0.032}$	$r_{\text{drag}}/D_V(0.57)$	0.07134	$0.07136^{+0.00097}_{-0.00096}$
$A_{100}^{\text{dustTT}}$	7.34	$7.4^{+3.7}_{-3.7}$	$\langle d^2 \rangle^{1/2}$	2.506	$2.507^{+0.078}_{-0.077}$	$H(0.57)$	92.86	$92.87^{+0.57}_{-0.55}$
$A_{143}^{\text{dustTT}}$	8.97	$8.9^{+3.6}_{-3.6}$	$z_{\text{re}}$	10.07	$10.0^{+3.1}_{-3.2}$	$D_A(0.57)$	1392.3	$1392^{+17}_{-17}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.0^{+8.1}_{-8.1}$	$10^9 A_s$	2.204	$2.21^{+0.15}_{-0.14}$	$F_{\text{AP}}(0.57)$	0.67708	$0.6770^{+0.0046}_{-0.0044}$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8824	$1.882^{+0.023}_{-0.024}$	$f\sigma_8(0.57)$	0.4842	$0.484^{+0.016}_{-0.015}$
$A_{100}^{\text{dustEE}}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{40}$	1240.0	$1242^{+26}_{-26}$	$\sigma_8(0.57)$	0.6171	$0.617^{+0.020}_{-0.020}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0488	$0.0488^{+0.0098}_{-0.0098}$	$D_{220}$	5726	$5729^{+76}_{-78}$	$f_{2000}^{143}$	29.2	$30^{+5}_{-5}$
$A_{100 \times 217}^{\text{dustEE}}$	0.0995	$0.099^{+0.065}_{-0.064}$	$D_{810}$	2535.8	$2536^{+26}_{-27}$	$f_{2000}^{143 \times 217}$	32.13	$32^{+4}_{-4}$
$A_{143}^{\text{dustEE}}$	0.1002	$0.100^{+0.013}_{-0.013}$	$D_{1420}$	814.9	$814.7^{+9.4}_{-9.3}$	$f_{2000}^{217}$	105.74	$105.8^{+3.7}_{-3.7}$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.225^{+0.093}_{-0.092}$	$D_{2000}$	230.48	$230.4^{+3.3}_{-3.2}$	$\chi_{\text{lowTEB}}^2$	10496.93	$10497.8 (\nu: 2.5)$
$A_{217}^{\text{dustEE}}$	0.645	$0.65^{+0.25}_{-0.25}$	$n_{s,0.002}$	0.9648	$0.9645^{+0.0098}_{-0.0096}$	$\chi_{\text{plik}}^2$	2431.6	$2450.6 (\nu: 23.0)$
$A_{100}^{\text{dustTE}}$	0.142	$0.141^{+0.074}_{-0.074}$	$Y_P$	0.245341	$0.24534^{+0.00014}_{-0.00014}$	$\chi_{\text{prior}}^2$	7.0	$19.3 (\nu: 15.1)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.131^{+0.057}_{-0.057}$	$Y_P^{\text{BBN}}$	0.246667	$0.24667^{+0.00014}_{-0.00014}$	$\chi_{\text{CMB}}^2$	12928.6	$12948.4 (\nu: 22.2)$

Best-fit  $\chi_{\text{eff}}^2 = 12935.56$ ;  $\bar{\chi}_{\text{eff}}^2 = 12967.69$ ;  $R - 1 = 0.00875$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.93 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.65

## 2.7 base\_plikHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022319	$0.02229^{+0.00029}_{-0.00027}$	$A_{143 \times 217}^{\text{dustTE}}$	0.335	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04105	$1.04103^{+0.00059}_{-0.00057}$
$\Omega_c h^2$	0.11910	$0.1192^{+0.0021}_{-0.0020}$	$A_{217}^{\text{dustTE}}$	1.66	$1.67^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	13.8998	$13.898^{+0.045}_{-0.045}$
$100\theta_{\text{MC}}$	1.04087	$1.04084^{+0.00060}_{-0.00057}$	$c_{100}$	0.99822	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.74	$1059.70^{+0.61}_{-0.57}$
$\tau$	0.0865	$0.082^{+0.033}_{-0.032}$	$c_{217}$	0.99585	$0.9959^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.389	$147.38^{+0.49}_{-0.49}$
$\ln(10^{10} A_s)$	3.106	$3.098^{+0.064}_{-0.064}$	$H_0$	67.61	$67.54^{+0.92}_{-0.93}$	$k_D$	0.14051	$0.14051^{+0.00058}_{-0.00058}$
$n_s$	0.9671	$0.9660^{+0.0083}_{-0.0081}$	$\Omega_\Lambda$	0.6892	$0.688^{+0.012}_{-0.013}$	$100\theta_D$	0.160849	$0.16088^{+0.00035}_{-0.00035}$
$y_{\text{cal}}$	1.00020	$1.0004^{+0.0049}_{-0.0049}$	$\Omega_m$	0.3108	$0.312^{+0.013}_{-0.012}$	$z_{\text{eq}}$	3379.4	$3382^{+47}_{-46}$
$A_{217}^{\text{CIB}}$	64.5	$64^{+10}_{-10}$	$\Omega_m h^2$	0.14206	$0.1422^{+0.0020}_{-0.0019}$	$k_{\text{eq}}$	0.010314	$0.01032^{+0.00014}_{-0.00014}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.33	—	$\Omega_m h^3$	0.09605	$0.09601^{+0.00059}_{-0.00057}$	$100\theta_{\text{eq}}$	0.8172	$0.8167^{+0.0088}_{-0.0087}$
$A_{143}^{\text{tSZ}}$	6.99	$5.4^{+3.6}_{-3.8}$	$\sigma_8$	0.8344	$0.831^{+0.027}_{-0.026}$	$100\theta_{\text{s,eq}}$	0.45146	$0.4512^{+0.0045}_{-0.0045}$
$A_{100}^{\text{PS}}$	253	$259^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4652	$0.464^{+0.017}_{-0.017}$	$r_{\text{drag}}/D_V(0.57)$	0.07161	$0.07156^{+0.00070}_{-0.00069}$
$A_{143}^{\text{PS}}$	42.8	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6230	$0.621^{+0.020}_{-0.020}$	$H(0.57)$	93.007	$92.97^{+0.43}_{-0.42}$
$A_{143 \times 217}^{\text{PS}}$	42.1	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0148	$1.012^{+0.032}_{-0.031}$	$D_A(0.57)$	1387.6	$1389^{+13}_{-12}$
$A_{217}^{\text{PS}}$	101.4	$98^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.509	$2.503^{+0.077}_{-0.075}$	$F_{\text{AP}}(0.57)$	0.67585	$0.6761^{+0.0032}_{-0.0031}$
$A^{\text{kSZ}}$	0.00	$< 7.75$	$z_{\text{re}}$	10.71	$10.3^{+2.9}_{-3.0}$	$f\sigma_8(0.57)$	0.4850	$0.483^{+0.015}_{-0.015}$
$A_{100}^{\text{dustTT}}$	7.35	$7.4^{+3.7}_{-3.7}$	$10^9 A_s$	2.234	$2.22^{+0.15}_{-0.14}$	$\sigma_8(0.57)$	0.6209	$0.618^{+0.020}_{-0.020}$
$A_{143}^{\text{dustTT}}$	8.94	$8.9^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8789	$1.880^{+0.022}_{-0.023}$	$f_{2000}^{143}$	28.5	$29^{+5}_{-5}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$16.9^{+8.1}_{-8.3}$	$D_{40}$	1238.1	$1240^{+25}_{-25}$	$f_{2000}^{143 \times 217}$	31.69	$32^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	82.0	$81^{+10}_{-10}$	$D_{220}$	5728	$5731^{+76}_{-77}$	$f_{2000}^{217}$	105.20	$105.7^{+3.6}_{-3.6}$
$A_{100}^{\text{dustEE}}$	0.0816	$0.081^{+0.011}_{-0.011}$	$D_{810}$	2535.0	$2535^{+27}_{-27}$	$\chi_{\text{lowTEB}}^2$	10497.42	$10497.7 (\nu: 2.8)$
$A_{100 \times 143}^{\text{dustEE}}$	0.0493	$0.0490^{+0.0097}_{-0.0099}$	$D_{1420}$	815.4	$815.0^{+9.3}_{-9.2}$	$\chi_{\text{plik}}^2$	2431.5	$2450.3 (\nu: 23.4)$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.0998^{+0.066}_{-0.064}$	$D_{2000}$	230.88	$230.6^{+3.2}_{-3.1}$	$\chi_{6\text{DF}}^2$	0.029	$0.066 (\nu: 0.0)$
$A_{143}^{\text{dustEE}}$	0.1007	$0.100^{+0.013}_{-0.013}$	$n_{\text{s},0.002}$	0.9671	$0.9660^{+0.0083}_{-0.0081}$	$\chi_{\text{MGS}}^2$	1.22	$1.21 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dustEE}}$	0.223	$0.225^{+0.092}_{-0.094}$	$Y_{\text{P}}$	0.245370	$0.24536^{+0.00013}_{-0.00013}$	$\chi_{\text{DR11CMAS}}^2$	2.50	$2.86 (\nu: 0.2)$
$A_{217}^{\text{dustEE}}$	0.651	$0.65^{+0.25}_{-0.26}$	$Y_{\text{P}}^{\text{BBN}}$	0.246697	$0.24668^{+0.00013}_{-0.00013}$	$\chi_{\text{DR11LOWZ}}^2$	0.68	$0.85 (\nu: 0.2)$
$A_{100}^{\text{dustTE}}$	0.140	$0.141^{+0.074}_{-0.074}$	$10^5 \text{D}/\text{H}$	2.601	$2.606^{+0.051}_{-0.054}$	$\chi_{\text{prior}}^2$	6.8	$19.5 (\nu: 15.5)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.057}_{-0.056}$	$\text{Age}/\text{Gyr}$	13.8006	$13.804^{+0.041}_{-0.043}$	$\chi_{\text{CMB}}^2$	12929.0	$12948.0 (\nu: 22.1)$
$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.17}_{-0.16}$	$z_*$	1089.904	$1089.95^{+0.46}_{-0.47}$	$\chi_{\text{BAO}}^2$	4.42	$4.99 (\nu: 0.4)$
$A_{143}^{\text{dustTE}}$	0.154	$0.15^{+0.11}_{-0.10}$	$r_*$	144.704	$144.69^{+0.48}_{-0.47}$			

Best-fit  $\chi_{\text{eff}}^2 = 12940.16$ ;  $\bar{\chi}_{\text{eff}}^2 = 12972.47$ ;  $R - 1 = 0.00954$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.03 MGS: 1.22 DR11CMAS: 2.50 DR11LOWZ: 0.68 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10497.42 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.54



## 2.8 base\_plikHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022287	$0.02227^{+0.00032}_{-0.00030}$	$A_{143}^{\text{dust}TE}$	0.160	$0.15^{+0.11}_{-0.10}$	$z_*$	1090.01	$1090.01^{+0.57}_{-0.57}$
$\Omega_c h^2$	0.11976	$0.1196^{+0.0029}_{-0.0028}$	$A_{143 \times 217}^{\text{dust}TE}$	0.339	$0.34^{+0.16}_{-0.16}$	$r_*$	144.56	$144.61^{+0.60}_{-0.62}$
$100\theta_{\text{MC}}$	1.04077	$1.04079^{+0.00064}_{-0.00062}$	$A_{217}^{\text{dust}TE}$	1.64	$1.67^{+0.50}_{-0.49}$	$100\theta_*$	1.04096	$1.04099^{+0.00063}_{-0.00061}$
$\tau$	0.0829	$0.080^{+0.034}_{-0.034}$	$c_{100}$	0.99829	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.887	$13.892^{+0.056}_{-0.057}$
$\ln(10^{10} A_s)$	3.101	$3.095^{+0.066}_{-0.065}$	$c_{217}$	0.99608	$0.9959^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.74	$1059.67^{+0.64}_{-0.63}$
$n_s$	0.9652	$0.9651^{+0.0096}_{-0.0094}$	$H_0$	67.32	$67.4^{+1.3}_{-1.3}$	$r_{\text{drag}}$	147.25	$147.31^{+0.60}_{-0.60}$
$y_{\text{cal}}$	1.00056	$1.0004^{+0.0049}_{-0.0049}$	$\Omega_\Lambda$	0.6851	$0.686^{+0.017}_{-0.018}$	$k_D$	0.14064	$0.14056^{+0.00063}_{-0.00063}$
$A_{217}^{\text{CIB}}$	64.6	$64^{+10}_{-10}$	$\Omega_m$	0.3149	$0.314^{+0.018}_{-0.017}$	$100\theta_D$	0.160857	$0.16089^{+0.00036}_{-0.00036}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.23	—	$\Omega_m h^2$	0.14270	$0.1425^{+0.0027}_{-0.0026}$	$z_{\text{eq}}$	3395	$3390^{+64}_{-62}$
$A_{143}^{\text{tSZ}}$	7.52	$5.4^{+3.6}_{-3.8}$	$\Omega_m h^3$	0.09606	$0.09601^{+0.00059}_{-0.00056}$	$k_{\text{eq}}$	0.010361	$0.01035^{+0.00020}_{-0.00019}$
$A_{100}^{\text{PS}}$	252	$259^{+50}_{-50}$	$\sigma_8$	0.8341	$0.831^{+0.027}_{-0.026}$	$100\theta_{\text{eq}}$	0.8143	$0.815^{+0.012}_{-0.012}$
$A_{143}^{\text{PS}}$	40.6	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4680	$0.466^{+0.019}_{-0.019}$	$100\theta_{s,\text{eq}}$	0.4500	$0.4504^{+0.0061}_{-0.0062}$
$A_{143 \times 217}^{\text{PS}}$	39.5	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6248	$0.622^{+0.021}_{-0.021}$	$r_{\text{drag}}/D_V(0.57)$	0.07138	$0.07143^{+0.00095}_{-0.00095}$
$A_{217}^{\text{PS}}$	101.1	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0166	$1.013^{+0.033}_{-0.032}$	$H(0.57)$	92.89	$92.91^{+0.55}_{-0.54}$
$A^{\text{kSZ}}$	0.01	$< 7.79$	$\langle d^2 \rangle^{1/2}$	2.514	$2.505^{+0.078}_{-0.076}$	$D_A(0.57)$	1391.4	$1391^{+17}_{-17}$
$A_{100}^{\text{dust}TT}$	7.54	$7.4^{+3.7}_{-3.7}$	$z_{\text{re}}$	10.41	$10.1^{+3.1}_{-3.1}$	$F_{\text{AP}}(0.57)$	0.67689	$0.6767^{+0.0045}_{-0.0043}$
$A_{143}^{\text{dust}TT}$	8.97	$8.9^{+3.6}_{-3.6}$	$10^9 A_s$	2.222	$2.21^{+0.15}_{-0.14}$	$f\sigma_8(0.57)$	0.4858	$0.484^{+0.016}_{-0.015}$
$A_{143 \times 217}^{\text{dust}TT}$	18.5	$16.9^{+8.1}_{-8.3}$	$10^9 A_s e^{-2\tau}$	1.8830	$1.881^{+0.023}_{-0.024}$	$\sigma_8(0.57)$	0.6196	$0.618^{+0.020}_{-0.020}$
$A_{217}^{\text{dust}TT}$	83.8	$82^{+10}_{-10}$	$D_{40}$	1241.6	$1241^{+26}_{-26}$	$f_{2000}^{143}$	28.8	$29^{+5}_{-5}$
$A_{100}^{\text{dust}EE}$	0.0814	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5732	$5730^{+77}_{-78}$	$f_{2000}^{143 \times 217}$	32.03	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0490	$0.0488^{+0.0097}_{-0.0098}$	$D_{810}$	2537.1	$2535^{+27}_{-27}$	$f_{2000}^{217}$	105.73	$105.8^{+3.7}_{-3.6}$
$A_{100 \times 217}^{\text{dust}EE}$	0.097	$0.099^{+0.065}_{-0.064}$	$D_{1420}$	815.5	$814.8^{+9.3}_{-9.3}$	$\chi_{\text{lowTEB}}^2$	10497.36	$10497.8 (\nu: 2.6)$
$A_{143}^{\text{dust}EE}$	0.1003	$0.100^{+0.013}_{-0.013}$	$D_{2000}$	230.83	$230.5^{+3.3}_{-3.2}$	$\chi_{\text{plik}}^2$	2431.6	$2450.5 (\nu: 23.3)$
$A_{143 \times 217}^{\text{dust}EE}$	0.225	$0.225^{+0.092}_{-0.093}$	$n_{s,0.002}$	0.9652	$0.9651^{+0.0096}_{-0.0094}$	$\chi_{\text{JLA}}^2$	706.86	$706.89 (\nu: 0.0)$
$A_{217}^{\text{dust}EE}$	0.681	$0.65^{+0.25}_{-0.26}$	$Y_P$	0.245356	$0.24535^{+0.00014}_{-0.00014}$	$\chi_{\text{prior}}^2$	6.6	$19.4 (\nu: 15.4)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.073}_{-0.074}$	$Y_P^{\text{BBN}}$	0.246683	$0.24667^{+0.00014}_{-0.00014}$	$\chi_{\text{CMB}}^2$	12929.0	$12948.3 (\nu: 22.4)$
$A_{100 \times 143}^{\text{dust}TE}$	0.130	$0.131^{+0.057}_{-0.057}$	$10^5 \text{D/H}$	2.607	$2.610^{+0.057}_{-0.059}$			
$A_{100 \times 217}^{\text{dust}TE}$	0.303	$0.30^{+0.17}_{-0.16}$	Age/Gyr	13.809	$13.810^{+0.049}_{-0.051}$			

Best-fit  $\chi_{\text{eff}}^2 = 13642.40$ ;  $\bar{\chi}_{\text{eff}}^2 = 13674.63$ ;  $R - 1 = 0.00946$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10497.36 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.61 SN - JLA December\_2013: 706.86

## 2.9 base\_plikHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022289	$0.02228^{+0.00032}_{-0.00030}$	$A_{143}^{\text{dust}TE}$	0.154	$0.15^{+0.11}_{-0.10}$	$z_*$	1089.98	$1090.00^{+0.58}_{-0.58}$
$\Omega_c h^2$	0.11945	$0.1196^{+0.0029}_{-0.0028}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.16}_{-0.16}$	$r_*$	144.64	$144.62^{+0.61}_{-0.63}$
$100\theta_{\text{MC}}$	1.04082	$1.04080^{+0.00065}_{-0.00063}$	$A_{217}^{\text{dust}TE}$	1.67	$1.67^{+0.50}_{-0.49}$	$100\theta_*$	1.04100	$1.04100^{+0.00064}_{-0.00062}$
$\tau$	0.0821	$0.081^{+0.034}_{-0.034}$	$c_{100}$	0.99821	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.894	$13.892^{+0.056}_{-0.058}$
$\ln(10^{10} A_s)$	3.098	$3.096^{+0.066}_{-0.066}$	$c_{217}$	0.99586	$0.9959^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.70	$1059.68^{+0.63}_{-0.59}$
$n_s$	0.9661	$0.9652^{+0.0097}_{-0.0095}$	$H_0$	67.44	$67.4^{+1.3}_{-1.3}$	$r_{\text{drag}}$	147.33	$147.31^{+0.60}_{-0.61}$
$y_{\text{cal}}$	1.00033	$1.0004^{+0.0049}_{-0.0049}$	$\Omega_\Lambda$	0.6870	$0.686^{+0.017}_{-0.018}$	$k_D$	0.14056	$0.14056^{+0.00064}_{-0.00064}$
$A_{217}^{\text{CIB}}$	65.1	$64^{+10}_{-10}$	$\Omega_m$	0.3130	$0.314^{+0.018}_{-0.017}$	$100\theta_D$	0.160870	$0.16089^{+0.00036}_{-0.00036}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.25	—	$\Omega_m h^2$	0.14238	$0.1425^{+0.0027}_{-0.0026}$	$z_{\text{eq}}$	3387	$3390^{+65}_{-63}$
$A_{143}^{\text{tSZ}}$	7.12	$5.4^{+3.6}_{-3.8}$	$\Omega_m h^3$	0.09603	$0.09602^{+0.00059}_{-0.00057}$	$k_{\text{eq}}$	0.010338	$0.01035^{+0.00020}_{-0.00019}$
$A_{100}^{\text{PS}}$	253	$259^{+50}_{-50}$	$\sigma_8$	0.8321	$0.831^{+0.027}_{-0.026}$	$100\theta_{\text{eq}}$	0.8157	$0.815^{+0.012}_{-0.012}$
$A_{143}^{\text{PS}}$	41.6	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4655	$0.466^{+0.019}_{-0.019}$	$100\theta_{s,\text{eq}}$	0.4507	$0.4505^{+0.0062}_{-0.0063}$
$A_{143 \times 217}^{\text{PS}}$	39.9	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6224	$0.622^{+0.021}_{-0.021}$	$r_{\text{drag}}/D_V(0.57)$	0.07148	$0.07145^{+0.00097}_{-0.00097}$
$A_{217}^{\text{PS}}$	100.7	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0132	$1.013^{+0.032}_{-0.032}$	$H(0.57)$	92.94	$92.92^{+0.57}_{-0.54}$
$A^{\text{kSZ}}$	0.00	$< 7.77$	$\langle d^2 \rangle^{1/2}$	2.505	$2.505^{+0.078}_{-0.076}$	$D_A(0.57)$	1389.8	$1391^{+17}_{-17}$
$A_{100}^{\text{dust}TT}$	7.39	$7.4^{+3.7}_{-3.7}$	$z_{\text{re}}$	10.33	$10.2^{+3.1}_{-3.1}$	$F_{\text{AP}}(0.57)$	0.67642	$0.6766^{+0.0046}_{-0.0044}$
$A_{143}^{\text{dust}TT}$	8.99	$8.9^{+3.6}_{-3.6}$	$10^9 A_s$	2.216	$2.21^{+0.15}_{-0.14}$	$f\sigma_8(0.57)$	0.4842	$0.484^{+0.016}_{-0.015}$
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$16.9^{+8.1}_{-8.3}$	$10^9 A_s e^{-2\tau}$	1.8806	$1.881^{+0.023}_{-0.024}$	$\sigma_8(0.57)$	0.6186	$0.618^{+0.020}_{-0.020}$
$A_{217}^{\text{dust}TT}$	82.0	$82^{+10}_{-10}$	$D_{40}$	1238.4	$1241^{+26}_{-26}$	$f_{2000}^{143}$	28.8	$29^{+5}_{-5}$
$A_{100}^{\text{dust}EE}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5728	$5730^{+77}_{-78}$	$f_{2000}^{143 \times 217}$	31.90	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0490	$0.0489^{+0.0097}_{-0.0098}$	$D_{810}$	2535.7	$2535^{+27}_{-27}$	$f_{2000}^{217}$	105.51	$105.7^{+3.7}_{-3.6}$
$A_{100 \times 217}^{\text{dust}EE}$	0.100	$0.099^{+0.065}_{-0.064}$	$D_{1420}$	815.3	$814.9^{+9.4}_{-9.3}$	$\chi_{\text{lowTEB}}^2$	10497.00	$10497.8 (\nu: 2.7)$
$A_{143}^{\text{dust}EE}$	0.1002	$0.100^{+0.013}_{-0.013}$	$D_{2000}$	230.73	$230.5^{+3.3}_{-3.2}$	$\chi_{\text{plik}}^2$	2431.8	$2450.6 (\nu: 23.4)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.225^{+0.092}_{-0.093}$	$n_{s,0.002}$	0.9661	$0.9652^{+0.0097}_{-0.0095}$	$\chi_{\text{H070p6}}^2$	0.90	$0.96 (\nu: 0.1)$
$A_{217}^{\text{dust}EE}$	0.655	$0.65^{+0.25}_{-0.26}$	$Y_P$	0.245357	$0.24535^{+0.00014}_{-0.00014}$	$\chi_{\text{prior}}^2$	6.8	$19.4 (\nu: 15.4)$
$A_{100}^{\text{dust}TE}$	0.140	$0.141^{+0.073}_{-0.074}$	$Y_P^{\text{BBN}}$	0.246684	$0.24668^{+0.00014}_{-0.00014}$	$\chi_{\text{CMB}}^2$	12928.8	$12948.4 (\nu: 22.5)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.057}_{-0.057}$	$10^5 \text{D/H}$	2.607	$2.609^{+0.058}_{-0.060}$			
$A_{100 \times 217}^{\text{dust}TE}$	0.304	$0.30^{+0.17}_{-0.16}$	Age/Gyr	13.807	$13.809^{+0.050}_{-0.051}$			

Best-fit  $\chi_{\text{eff}}^2 = 12936.48$ ;  $\bar{\chi}_{\text{eff}}^2 = 12968.75$ ;  $R - 1 = 0.00925$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10497.00 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.77 Hubble - H070p6: 0.90

## 2.10 base\_plikHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02225^{+0.00032}_{-0.00030}$	$A_{100 \times 217}^{\text{dust}TE}$	$0.30^{+0.17}_{-0.16}$	$10^5 \text{D/H}$	$2.613^{+0.057}_{-0.060}$
$\Omega_c h^2$	$0.1198^{+0.0029}_{-0.0028}$	$A_{143}^{\text{dust}TE}$	$0.15^{+0.11}_{-0.10}$	Age/Gyr	$13.813^{+0.050}_{-0.052}$
$100\theta_{\text{MC}}$	$1.04077^{+0.00065}_{-0.00063}$	$A_{143 \times 217}^{\text{dust}TE}$	$0.34^{+0.16}_{-0.16}$	$z_*$	$1090.05^{+0.58}_{-0.58}$
$\tau$	$0.080^{+0.033}_{-0.033}$	$A_{217}^{\text{dust}TE}$	$1.67^{+0.50}_{-0.49}$	$r_*$	$144.57^{+0.62}_{-0.63}$
$\ln(10^{10} A_s)$	$3.095^{+0.063}_{-0.064}$	$c_{100}$	$0.9982^{+0.0015}_{-0.0015}$	$100\theta_*$	$1.04097^{+0.00063}_{-0.00062}$
$n_s$	$0.9646^{+0.0097}_{-0.0095}$	$c_{217}$	$0.9959^{+0.0028}_{-0.0028}$	$D_A/\text{Gpc}$	$13.888^{+0.057}_{-0.058}$
$y_{\text{cal}}$	$1.0004^{+0.0049}_{-0.0049}$	$H_0$	$67.3^{+1.3}_{-1.3}$	$z_{\text{drag}}$	$1059.65^{+0.63}_{-0.59}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$\Omega_\Lambda$	$0.685^{+0.017}_{-0.018}$	$r_{\text{drag}}$	$147.27^{+0.61}_{-0.61}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\Omega_m$	$0.315^{+0.018}_{-0.017}$	$k_D$	$0.14059^{+0.00064}_{-0.00064}$
$A_{143}^{\text{tSZ}}$	$5.4^{+3.6}_{-3.8}$	$\Omega_m h^2$	$0.1427^{+0.0027}_{-0.0027}$	$100\theta_D$	$0.16090^{+0.00036}_{-0.00036}$
$A_{100}^{\text{PS}}$	$259^{+50}_{-50}$	$\Omega_m h^3$	$0.09601^{+0.00059}_{-0.00056}$	$z_{\text{eq}}$	$3395^{+65}_{-63}$
$A_{143}^{\text{PS}}$	$43^{+10}_{-20}$	$\sigma_8$	$0.832^{+0.026}_{-0.025}$	$k_{\text{eq}}$	$0.01036^{+0.00020}_{-0.00019}$
$A_{143 \times 217}^{\text{PS}}$	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	$0.467^{+0.019}_{-0.018}$	$100\theta_{\text{eq}}$	$0.814^{+0.012}_{-0.012}$
$A_{217}^{\text{PS}}$	$98^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	$0.623^{+0.021}_{-0.020}$	$100\theta_{\text{s,eq}}$	$0.4500^{+0.0062}_{-0.0062}$
$A^{\text{kSZ}}$	$< 7.78$	$\sigma_8/h^{0.5}$	$1.014^{+0.032}_{-0.030}$	$r_{\text{drag}}/D_V(0.57)$	$0.07137^{+0.00097}_{-0.00096}$
$A_{100}^{\text{dust}TT}$	$7.4^{+3.7}_{-3.7}$	$\langle d^2 \rangle^{1/2}$	$2.508^{+0.077}_{-0.073}$	$H(0.57)$	$92.87^{+0.56}_{-0.54}$
$A_{143}^{\text{dust}TT}$	$8.9^{+3.6}_{-3.6}$	$z_{\text{re}}$	$10.1^{+2.8}_{-2.9}$	$D_A(0.57)$	$1392^{+17}_{-17}$
$A_{143 \times 217}^{\text{dust}TT}$	$17.0^{+8.1}_{-8.3}$	$10^9 A_s$	$2.21^{+0.14}_{-0.14}$	$F_{\text{AP}}(0.57)$	$0.6770^{+0.0045}_{-0.0044}$
$A_{217}^{\text{dust}TT}$	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.023}_{-0.024}$	$f\sigma_8(0.57)$	$0.484^{+0.015}_{-0.015}$
$A_{100}^{\text{dust}EE}$	$0.081^{+0.011}_{-0.011}$	$D_{40}$	$1242^{+26}_{-26}$	$\sigma_8(0.57)$	$0.618^{+0.020}_{-0.019}$
$A_{100 \times 143}^{\text{dust}EE}$	$0.0488^{+0.0098}_{-0.0098}$	$D_{220}$	$5729^{+76}_{-78}$	$f_{2000}^{143}$	$29^{+5}_{-5}$
$A_{100 \times 217}^{\text{dust}EE}$	$0.099^{+0.065}_{-0.064}$	$D_{810}$	$2536^{+27}_{-27}$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$
$A_{143}^{\text{dust}EE}$	$0.100^{+0.013}_{-0.013}$	$D_{1420}$	$814.7^{+9.3}_{-9.3}$	$f_{2000}^{217}$	$105.8^{+3.7}_{-3.6}$
$A_{143 \times 217}^{\text{dust}EE}$	$0.225^{+0.092}_{-0.093}$	$D_{2000}$	$230.4^{+3.2}_{-3.2}$	$\chi_{\text{lowTEB}}^2$	$10497.8 (\nu: 2.5)$
$A_{217}^{\text{dust}EE}$	$0.65^{+0.25}_{-0.26}$	$n_{\text{s},0.002}$	$0.9646^{+0.0097}_{-0.0095}$	$\chi_{\text{plik}}^2$	$2450.5 (\nu: 22.9)$
$A_{100}^{\text{dust}TE}$	$0.141^{+0.074}_{-0.075}$	$Y_{\text{P}}$	$0.24534^{+0.00014}_{-0.00014}$	$\chi_{\text{prior}}^2$	$19.4 (\nu: 15.5)$
$A_{100 \times 143}^{\text{dust}TE}$	$0.131^{+0.057}_{-0.057}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24667^{+0.00014}_{-0.00014}$	$\chi_{\text{CMB}}^2$	$12948.3 (\nu: 22.2)$

$$\bar{\chi}_{\text{eff}}^2 = 12967.68; R - 1 = 0.00977$$

## 2.11 base\_CamSpecHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022210	$0.02225^{+0.00047}_{-0.00046}$ (+0.1 $\sigma$ )	$H_0$	67.36	$67.5^{+1.9}_{-1.9}$ (+0.2 $\sigma$ )	$100\theta_*$	1.04112	$1.04115^{+0.00094}_{-0.00091}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	0.11959	$0.1194^{+0.0043}_{-0.0042}$ (-0.2 $\sigma$ )	$\Omega_\Lambda$	0.6861	$0.687^{+0.025}_{-0.027}$ (+0.2 $\sigma$ )	$z_{\text{drag}}$	1059.51	$1059.60^{+0.95}_{-0.92}$ (+0.1 $\sigma$ )
$100\theta_{\text{MC}}$	1.04090	$1.04094^{+0.00096}_{-0.00093}$ (+0.2 $\sigma$ )	$\Omega_m$	0.3139	$0.313^{+0.027}_{-0.025}$ (-0.2 $\sigma$ )	$r_{\text{drag}}$	147.38	$147.39^{+0.94}_{-0.93}$ (+0.1 $\sigma$ )
$\tau$	0.0766	$0.079^{+0.037}_{-0.037}$ (+0.1 $\sigma$ )	$\Omega_m h^2$	0.14245	$0.1423^{+0.0040}_{-0.0039}$ (-0.2 $\sigma$ )	$k_D$	0.14046	$0.14047^{+0.00099}_{-0.00099}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.084	$3.089^{+0.072}_{-0.071}$ (-0.0 $\sigma$ )	$\Omega_m h^3$	0.09595	$0.09600^{+0.00089}_{-0.00090}$ (+0.1 $\sigma$ )	$100\theta_D$	0.16097	$0.16094^{+0.00054}_{-0.00053}$ (-0.1 $\sigma$ )
$n_s$	0.9670	$0.968^{+0.013}_{-0.012}$ (+0.4 $\sigma$ )	$\sigma_8$	0.8276	$0.829^{+0.029}_{-0.029}$ (-0.0 $\sigma$ )	$z_{\text{eq}}$	3389	$3385^{+97}_{-94}$ (-0.2 $\sigma$ )
$y_{\text{cal}}$	1.00027	$1.0003^{+0.0049}_{-0.0049}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4637	$0.464^{+0.026}_{-0.026}$ (-0.2 $\sigma$ )	$100\theta_{\text{eq}}$	0.8153	$0.816^{+0.018}_{-0.018}$ (+0.2 $\sigma$ )
$A_{100}^{\text{PS}}$	248.1	$245^{+40}_{-50}$ (-0.4 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6195	$0.620^{+0.026}_{-0.026}$ (-0.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07146	$0.0715^{+0.0015}_{-0.0014}$ (+0.2 $\sigma$ )
$A_{143}^{\text{PS}}$	35.6	$39^{+20}_{-20}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0084	$1.009^{+0.038}_{-0.039}$ (-0.1 $\sigma$ )	$H(0.57)$	92.89	$92.95^{+0.87}_{-0.81}$ (+0.2 $\sigma$ )
$A_{217}^{\text{PS}}$	96.2	$98^{+30}_{-30}$ (+0.1 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.487	$2.489^{+0.088}_{-0.090}$ (-0.2 $\sigma$ )	$D_A(0.57)$	1391.0	$1389^{+26}_{-26}$ (-0.2 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.6	$46^{+10}_{-10}$ (-2.7 $\sigma$ )	$z_{\text{re}}$	9.86	$9.99^{+3.4}_{-3.5}$ (+0.1 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6766	$0.6763^{+0.0068}_{-0.0065}$ (-0.2 $\sigma$ )
$A_{143}^{\text{tSZ}}$	3.42	< 6.63 (-1.0 $\sigma$ )	$10^9 A_s$	2.186	$2.20^{+0.16}_{-0.15}$ (-0.0 $\sigma$ )	$f\sigma_8(0.57)$	0.4818	$0.482^{+0.018}_{-0.018}$ (-0.1 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.424	$0.52^{+0.23}_{-0.21}$	$10^9 A_s e^{-2\tau}$	1.8750	$1.875^{+0.028}_{-0.027}$ (-0.4 $\sigma$ )	$\sigma_8(0.57)$	0.6151	$0.617^{+0.022}_{-0.021}$ (+0.0 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1228.8	$1229^{+29}_{-29}$ (-0.6 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246232	$0.24625^{+0.00020}_{-0.00020}$ (-3.9 $\sigma$ )
$A^{\text{kSZ}}$	4.9	—	$D_{220}$	5695	$5697^{+81}_{-79}$ (-0.5 $\sigma$ )	$f_{2000}^{143}$	29.4	$29^{+6}_{-6}$ (-0.4 $\sigma$ )
$A_{100}^{\text{dust}}$	0.989	$0.99^{+0.37}_{-0.38}$	$D_{810}$	2529.3	$2530^{+27}_{-27}$ (-0.3 $\sigma$ )	$f_{2000}^{217}$	106.74	$106.3^{+4.0}_{-4.1}$ (+0.1 $\sigma$ )
$A_{143}^{\text{dust}}$	1.043	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	813.7	$815^{+10}_{-10}$ (+0.0 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.94	$32^{+4}_{-4}$ (-0.4 $\sigma$ )
$A_{217}^{\text{dust}}$	1.213	$1.22^{+0.23}_{-0.23}$	$n_{s,0.002}$	0.9670	$0.968^{+0.013}_{-0.012}$ (+0.4 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10495.77	$10496.7 (\nu: 2.6)$ (-0.3 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.962	$0.98^{+0.35}_{-0.35}$	$Y_{\text{P}}$	0.244904	$0.24492^{+0.00020}_{-0.00019}$ (-3.9 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	8045.1	$8059.7 (\nu: 17.4)$
$c_{100}$	0.99665	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	Age/Gyr	13.812	$13.806^{+0.076}_{-0.078}$ (-0.2 $\sigma$ )	$\chi_{\text{prior}}^2$	3.5	$8.5 (\nu: 6.1)$ (+0.3 $\sigma$ )
$c_{217}$	0.99729	$0.9972^{+0.0035}_{-0.0035}$ (+0.9 $\sigma$ )	$z_*$	1090.07	$1090.01^{+0.86}_{-0.85}$ (-0.2 $\sigma$ )	$\chi_{\text{CMB}}^2$	18540.9	$18556.4 (\nu: 16.7)$ (+1322.7 $\sigma$ )
$\beta_1^1$	-0.02	$0.0^{+2.0}_{-2.0}$	$r_*$	144.66	$144.68^{+0.95}_{-0.94}$ (+0.1 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 18544.46$ ;  $\Delta\chi_{\text{eff}}^2 = 7282.53$ ;  $\bar{\chi}_{\text{eff}}^2 = 18564.84$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7283.02$ ;  $R - 1 = 0.00503$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.77 ( $\Delta$  -0.70) CamSpec like.v9.10CMH\_unified: 8045.15

## 2.12 base\_CamSpecHM\_TT\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022255	$0.02228^{+0.00040}_{-0.00039}$ (+0.1 $\sigma$ )	$\Omega_m$	0.3093	$0.310^{+0.015}_{-0.015}$ (-0.1 $\sigma$ )	$100\theta_D$	0.16095	$0.16092^{+0.00052}_{-0.00051}$ (-0.1 $\sigma$ )
$\Omega_c h^2$	0.11883	$0.1189^{+0.0025}_{-0.0025}$ (-0.1 $\sigma$ )	$\Omega_m h^2$	0.14173	$0.1418^{+0.0024}_{-0.0024}$ (-0.1 $\sigma$ )	$z_{\text{eq}}$	3371	$3374^{+58}_{-57}$ (-0.1 $\sigma$ )
$100\theta_{\text{MC}}$	1.04100	$1.04101^{+0.00084}_{-0.00083}$ (+0.1 $\sigma$ )	$\Omega_m h^3$	0.09595	$0.09601^{+0.00090}_{-0.00088}$ (+0.1 $\sigma$ )	$100\theta_{\text{eq}}$	0.8186	$0.818^{+0.011}_{-0.011}$ (+0.1 $\sigma$ )
$\tau$	0.0797	$0.080^{+0.035}_{-0.036}$ (+0.0 $\sigma$ )	$\sigma_8$	0.8274	$0.828^{+0.029}_{-0.029}$ (-0.0 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07172	$0.07170^{+0.00085}_{-0.00083}$ (+0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.089	$3.091^{+0.069}_{-0.071}$ (-0.1 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4601	$0.461^{+0.020}_{-0.020}$ (-0.1 $\sigma$ )	$H(0.57)$	93.02	$93.04^{+0.55}_{-0.52}$ (+0.1 $\sigma$ )
$n_s$	0.9686	$0.9693^{+0.0090}_{-0.0085}$ (+0.5 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6170	$0.618^{+0.023}_{-0.024}$ (-0.1 $\sigma$ )	$D_A(0.57)$	1386.6	$1386^{+15}_{-15}$ (-0.1 $\sigma$ )
$y_{\text{cal}}$	1.00043	$1.0003^{+0.0049}_{-0.0048}$ (-0.0 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0056	$1.007^{+0.036}_{-0.037}$ (-0.1 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.67546	$0.6755^{+0.0038}_{-0.0038}$ (-0.1 $\sigma$ )
$A_{100}^{\text{PS}}$	249.1	$245^{+40}_{-40}$ (-0.4 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.482	$2.483^{+0.084}_{-0.086}$ (-0.2 $\sigma$ )	$f\sigma_8(0.57)$	0.4805	$0.481^{+0.017}_{-0.018}$ (-0.1 $\sigma$ )
$A_{143}^{\text{PS}}$	35.0	$38^{+10}_{-20}$ (-0.6 $\sigma$ )	$z_{\text{re}}$	10.12	$10.1^{+3.2}_{-3.3}$ (-0.0 $\sigma$ )	$\sigma_8(0.57)$	0.6161	$0.617^{+0.022}_{-0.022}$ (-0.0 $\sigma$ )
$A_{217}^{\text{PS}}$	95.6	$98^{+30}_{-30}$ (+0.1 $\sigma$ )	$10^9 A_s$	2.196	$2.20^{+0.16}_{-0.15}$ (-0.1 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246252	$0.24626^{+0.00017}_{-0.00017}$ (-4.5 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.4	$46^{+10}_{-10}$ (-2.7 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.8722	$1.873^{+0.023}_{-0.023}$ (-0.4 $\sigma$ )	$f_{2000}^{143}$	29.3	$28^{+6}_{-6}$ (-0.4 $\sigma$ )
$A_{143}^{\text{tSZ}}$	3.13	< 6.60 (-1.0 $\sigma$ )	$D_{40}$	1226.9	$1227^{+26}_{-26}$ (-0.6 $\sigma$ )	$f_{2000}^{217}$	106.79	$106.1^{+4.0}_{-3.9}$ (+0.1 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.411	$0.52^{+0.23}_{-0.22}$	$D_{220}$	5700	$5699^{+79}_{-76}$ (-0.5 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.84	$31^{+4}_{-4}$ (-0.4 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$D_{810}$	2529.0	$2530^{+27}_{-26}$ (-0.2 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10495.74	10496.5 ( $\nu$ : 2.6) (-0.3 $\sigma$ )
$A^{\text{kSZ}}$	5.4	—	$D_{1420}$	814.0	$814.8^{+9.8}_{-9.8}$ (+0.0 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	8045.2	8059.3 ( $\nu$ : 17.4)
$A_{100}^{\text{dust}}$	1.001	$0.99^{+0.37}_{-0.38}$	$n_{s,0.002}$	0.9686	$0.9693^{+0.0090}_{-0.0085}$ (+0.5 $\sigma$ )	$\chi_{6\text{DF}}^2$	0.015	0.057 ( $\nu$ : 0.0) (-0.1 $\sigma$ )
$A_{143}^{\text{dust}}$	1.032	$1.02^{+0.36}_{-0.36}$	$Y_{\text{P}}$	0.244922	$0.24494^{+0.00018}_{-0.00016}$ (-4.5 $\sigma$ )	$\chi_{\text{MGS}}^2$	1.34	1.40 ( $\nu$ : 0.2) (+0.1 $\sigma$ )
$A_{217}^{\text{dust}}$	1.219	$1.22^{+0.23}_{-0.23}$	Age/Gyr	13.802	$13.799^{+0.056}_{-0.058}$ (-0.1 $\sigma$ )	$\chi_{\text{DR11CMass}}^2$	2.42	2.87 ( $\nu$ : 0.2) (-0.0 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.950	$0.98^{+0.36}_{-0.35}$	$z_*$	1089.94	$1089.92^{+0.60}_{-0.59}$ (-0.2 $\sigma$ )	$\chi_{\text{DR11LOWZ}}^2$	0.54	0.70 ( $\nu$ : 0.2) (-0.1 $\sigma$ )
$c_{100}$	0.99668	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	$r_*$	144.82	$144.79^{+0.62}_{-0.63}$ (+0.1 $\sigma$ )	$\chi_{\text{prior}}^2$	3.6	8.5 ( $\nu$ : 6.0) (+0.3 $\sigma$ )
$c_{217}$	0.99743	$0.9972^{+0.0035}_{-0.0034}$ (+0.9 $\sigma$ )	$100\theta_*$	1.04121	$1.04121^{+0.00082}_{-0.00082}$ (+0.2 $\sigma$ )	$\chi_{\text{CMB}}^2$	18540.9	18555.8 ( $\nu$ : 16.1) (+1340.5 $\sigma$ )
$\beta_1^1$	-0.02	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	1059.55	$1059.63^{+0.88}_{-0.85}$ (+0.0 $\sigma$ )	$\chi_{\text{BAO}}^2$	4.32	5.02 ( $\nu$ : 0.5) (-0.0 $\sigma$ )
$H_0$	67.70	$67.7^{+1.1}_{-1.1}$ (+0.1 $\sigma$ )	$r_{\text{drag}}$	147.53	$147.48^{+0.66}_{-0.68}$ (+0.0 $\sigma$ )			
$\Omega_\Lambda$	0.6907	$0.690^{+0.015}_{-0.015}$ (+0.1 $\sigma$ )	$k_D$	0.14033	$0.14040^{+0.00087}_{-0.00084}$ (+0.0 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 18548.90$ ;  $\Delta\chi_{\text{eff}}^2 = 7282.46$ ;  $\bar{\chi}_{\text{eff}}^2 = 18569.34$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7282.97$ ;  $R - 1 = 0.01241$   
 $\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 ( $\Delta$  -0.01) MGS: 1.34 ( $\Delta$  0.06) DR11CMass: 2.42 ( $\Delta$  -0.04) DR11LOWZ: 0.54 ( $\Delta$  -0.07) CMB - lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.74  
( $\Delta$  -0.68) CamSpec like\_v9.10CMH\_unified: 8045.20

### 2.13 base\_CamSpecHM\_TT\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02228^{+0.00045}_{-0.00045} (+0.1\sigma)$	$H_0$	$67.7^{+1.8}_{-1.8} (+0.2\sigma)$	$100\theta_*$	$1.04120^{+0.00092}_{-0.00090} (+0.2\sigma)$
$\Omega_c h^2$	$0.1190^{+0.0040}_{-0.0039} (-0.2\sigma)$	$\Omega_\Lambda$	$0.690^{+0.023}_{-0.025} (+0.2\sigma)$	$z_{\text{drag}}$	$1059.63^{+0.92}_{-0.91} (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04099^{+0.00094}_{-0.00091} (+0.2\sigma)$	$\Omega_m$	$0.310^{+0.025}_{-0.023} (-0.2\sigma)$	$r_{\text{drag}}$	$147.46^{+0.90}_{-0.89} (+0.1\sigma)$
$\tau$	$0.080^{+0.037}_{-0.037} (+0.1\sigma)$	$\Omega_m h^2$	$0.1419^{+0.0038}_{-0.0036} (-0.2\sigma)$	$k_D$	$0.14042^{+0.00097}_{-0.00097} (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.091^{+0.071}_{-0.071} (-0.0\sigma)$	$\Omega_m h^3$	$0.09601^{+0.00089}_{-0.00090} (+0.1\sigma)$	$100\theta_D$	$0.16092^{+0.00053}_{-0.00052} (-0.1\sigma)$
$n_s$	$0.969^{+0.012}_{-0.012} (+0.4\sigma)$	$\sigma_8$	$0.829^{+0.029}_{-0.029} (-0.0\sigma)$	$z_{\text{eq}}$	$3376^{+91}_{-87} (-0.2\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0049} (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.462^{+0.025}_{-0.025} (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.818^{+0.017}_{-0.017} (+0.2\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} (-0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.618^{+0.025}_{-0.026} (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0717^{+0.0014}_{-0.0013} (+0.2\sigma)$
$A_{143}^{\text{PS}}$	$38^{+20}_{-20} (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.008^{+0.038}_{-0.038} (-0.1\sigma)$	$H(0.57)$	$93.03^{+0.83}_{-0.78} (+0.2\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} (+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.485^{+0.088}_{-0.089} (-0.2\sigma)$	$D_A(0.57)$	$1387^{+24}_{-24} (-0.2\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} (-2.7\sigma)$	$z_{\text{re}}$	$10.1^{+3.3}_{-3.4} (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6757^{+0.0063}_{-0.0060} (-0.2\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.64 (-1.0\sigma)$	$10^9 A_s$	$2.20^{+0.16}_{-0.15} (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.481^{+0.018}_{-0.019} (-0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.22}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.026}_{-0.026} (-0.4\sigma)$	$\sigma_8(0.57)$	$0.617^{+0.022}_{-0.022} (+0.0\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1227^{+29}_{-28} (-0.6\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24626^{+0.00019}_{-0.00020} (-4.0\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5699^{+81}_{-78} (-0.5\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{810}$	$2530^{+27}_{-27} (-0.3\sigma)$	$f_{2000}^{217}$	$106.2^{+4.0}_{-4.0} (+0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	$815^{+10}_{-10} (+0.0\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.969^{+0.012}_{-0.012} (+0.4\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.6 (\nu: 2.7) (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.36}_{-0.35}$	$Y_{\text{P}}$	$0.24493^{+0.00020}_{-0.00019} (-4.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8059.7 (\nu: 17.7)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	$\text{Age/Gyr}$	$13.800^{+0.074}_{-0.075} (-0.2\sigma)$	$\chi_{\text{JLA}}^2$	$706.84 (\nu: 0.1) (-0.1\sigma)$
$c_{217}$	$0.9972^{+0.0036}_{-0.0034} (+0.9\sigma)$	$z_*$	$1089.94^{+0.81}_{-0.80} (-0.2\sigma)$	$\chi_{\text{prior}}^2$	$8.5 (\nu: 6.1) (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_*$	$144.76^{+0.89}_{-0.88} (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18556.4 (\nu: 16.7) (+1323.6\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 19271.70; \Delta\bar{\chi}_{\text{eff}}^2 = 7283.10; R - 1 = 0.00909$$

## 2.14 base\_CamSpecHM\_TT\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02229^{+0.00045}_{-0.00045} \quad (+0.1\sigma)$	$H_0$	$67.7^{+1.9}_{-1.8} \quad (+0.2\sigma)$	$100\theta_*$	$1.04122^{+0.00092}_{-0.00091} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1189^{+0.0042}_{-0.0040} \quad (-0.2\sigma)$	$\Omega_\Lambda$	$0.691^{+0.024}_{-0.026} \quad (+0.2\sigma)$	$z_{\text{drag}}$	$1059.66^{+0.93}_{-0.89} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04102^{+0.00094}_{-0.00092} \quad (+0.2\sigma)$	$\Omega_m$	$0.309^{+0.026}_{-0.024} \quad (-0.2\sigma)$	$r_{\text{drag}}$	$147.48^{+0.92}_{-0.91} \quad (+0.1\sigma)$
$\tau$	$0.081^{+0.038}_{-0.037} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1418^{+0.0039}_{-0.0038} \quad (-0.2\sigma)$	$k_D$	$0.14041^{+0.00099}_{-0.00099} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.092^{+0.072}_{-0.072} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.09602^{+0.00088}_{-0.00089} \quad (+0.1\sigma)$	$100\theta_D$	$0.16091^{+0.00053}_{-0.00052} \quad (-0.1\sigma)$
$n_s$	$0.969^{+0.013}_{-0.012} \quad (+0.4\sigma)$	$\sigma_8$	$0.829^{+0.030}_{-0.029} \quad (-0.0\sigma)$	$z_{\text{eq}}$	$3373^{+94}_{-90} \quad (-0.2\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.461^{+0.026}_{-0.025} \quad (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.818^{+0.018}_{-0.018} \quad (+0.2\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} \quad (-0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.618^{+0.025}_{-0.026} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0717^{+0.0014}_{-0.0014} \quad (+0.2\sigma)$
$A_{143}^{\text{PS}}$	$38^{+20}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.007^{+0.038}_{-0.039} \quad (-0.1\sigma)$	$H(0.57)$	$93.06^{+0.85}_{-0.79} \quad (+0.2\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.484^{+0.089}_{-0.089} \quad (-0.2\sigma)$	$D_A(0.57)$	$1386^{+25}_{-25} \quad (-0.2\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$z_{\text{re}}$	$10.2^{+3.3}_{-3.4} \quad (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6755^{+0.0066}_{-0.0062} \quad (-0.2\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.65 \quad (-1.0\sigma)$	$10^9 A_s$	$2.20^{+0.16}_{-0.15} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.481^{+0.018}_{-0.019} \quad (-0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.22}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.027}_{-0.027} \quad (-0.4\sigma)$	$\sigma_8(0.57)$	$0.617^{+0.022}_{-0.022} \quad (+0.0\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1227^{+29}_{-29} \quad (-0.6\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24627^{+0.00019}_{-0.00020} \quad (-3.9\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5700^{+81}_{-79} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-6} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.37}$	$D_{810}$	$2530^{+27}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$106.1^{+4.1}_{-4.0} \quad (+0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	$815^{+10}_{-10} \quad (+0.0\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.969^{+0.013}_{-0.012} \quad (+0.4\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.7 \quad (\nu: 2.8) \quad (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.36}_{-0.35}$	$Y_{\text{P}}$	$0.24494^{+0.00020}_{-0.00019} \quad (-4.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8059.8 \quad (\nu: 17.9)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$\text{Age/Gyr}$	$13.798^{+0.076}_{-0.076} \quad (-0.2\sigma)$	$\chi_{\text{H070p6}}^2$	$0.82 \quad (\nu: 0.1) \quad (-0.2\sigma)$
$c_{217}$	$0.9972^{+0.0036}_{-0.0034} \quad (+0.9\sigma)$	$z_*$	$1089.91^{+0.83}_{-0.82} \quad (-0.2\sigma)$	$\chi_{\text{prior}}^2$	$8.5 \quad (\nu: 6.1) \quad (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_*$	$144.79^{+0.92}_{-0.91} \quad (+0.2\sigma)$	$\chi_{\text{CMB}}^2$	$18556.5 \quad (\nu: 16.8) \quad (+1317.9\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 18565.79; \Delta\bar{\chi}_{\text{eff}}^2 = 7283.10; R - 1 = 0.00963$$

## 2.15 base\_CamSpecHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02225^{+0.00046}_{-0.00045} \quad (+0.1\sigma)$	$H_0$	$67.5^{+1.9}_{-1.9} \quad (+0.2\sigma)$	$100\theta_*$	$1.04115^{+0.00094}_{-0.00091} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1194^{+0.0042}_{-0.0041} \quad (-0.2\sigma)$	$\Omega_\Lambda$	$0.688^{+0.025}_{-0.027} \quad (+0.2\sigma)$	$z_{\text{drag}}$	$1059.60^{+0.94}_{-0.89} \quad (+0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04095^{+0.00096}_{-0.00093} \quad (+0.2\sigma)$	$\Omega_m$	$0.312^{+0.027}_{-0.025} \quad (-0.2\sigma)$	$r_{\text{drag}}$	$147.40^{+0.94}_{-0.93} \quad (+0.1\sigma)$
$\tau$	$0.080^{+0.034}_{-0.034} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1422^{+0.0040}_{-0.0039} \quad (-0.2\sigma)$	$k_D$	$0.14047^{+0.00099}_{-0.00098} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.091^{+0.067}_{-0.067} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.09601^{+0.00089}_{-0.00089} \quad (+0.1\sigma)$	$100\theta_D$	$0.16093^{+0.00052}_{-0.00052} \quad (-0.1\sigma)$
$n_s$	$0.968^{+0.013}_{-0.012} \quad (+0.4\sigma)$	$\sigma_8$	$0.830^{+0.028}_{-0.028} \quad (-0.0\sigma)$	$z_{\text{eq}}$	$3384^{+96}_{-93} \quad (-0.2\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.464^{+0.026}_{-0.026} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.816^{+0.018}_{-0.018} \quad (+0.2\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} \quad (-0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.620^{+0.026}_{-0.025} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0716^{+0.0015}_{-0.0014} \quad (+0.2\sigma)$
$A_{143}^{\text{PS}}$	$39^{+20}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.010^{+0.038}_{-0.037} \quad (-0.1\sigma)$	$H(0.57)$	$92.96^{+0.87}_{-0.81} \quad (+0.2\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.490^{+0.087}_{-0.086} \quad (-0.2\sigma)$	$D_A(0.57)$	$1389^{+26}_{-26} \quad (-0.2\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$z_{\text{re}}$	$10.1^{+2.9}_{-3.2} \quad (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6762^{+0.0067}_{-0.0065} \quad (-0.2\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.61 \quad (-1.0\sigma)$	$10^9 A_s$	$2.20^{+0.15}_{-0.15} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.483^{+0.018}_{-0.018} \quad (-0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.22}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.028}_{-0.027} \quad (-0.4\sigma)$	$\sigma_8(0.57)$	$0.617^{+0.021}_{-0.021} \quad (+0.0\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1229^{+29}_{-29} \quad (-0.6\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24625^{+0.00019}_{-0.00020} \quad (-3.9\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5697^{+81}_{-79} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$D_{810}$	$2530^{+27}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$106.2^{+4.0}_{-4.0} \quad (+0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	$815^{+10}_{-10} \quad (+0.0\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.968^{+0.013}_{-0.012} \quad (+0.4\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.7 \quad (\nu: 2.6) \quad (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$Y_{\text{P}}$	$0.24492^{+0.00020}_{-0.00019} \quad (-4.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8059.6 \quad (\nu: 17.2)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$\text{Age/Gyr}$	$13.805^{+0.075}_{-0.078} \quad (-0.2\sigma)$	$\chi_{\text{prior}}^2$	$8.5 \quad (\nu: 6.1) \quad (+0.3\sigma)$
$c_{217}$	$0.9972^{+0.0035}_{-0.0034} \quad (+0.9\sigma)$	$z_*$	$1090.00^{+0.85}_{-0.85} \quad (-0.2\sigma)$	$\chi_{\text{CMB}}^2$	$18556.3 \quad (\nu: 16.4) \quad (+1336.8\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_*$	$144.69^{+0.94}_{-0.93} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18564.78; \Delta\bar{\chi}_{\text{eff}}^2 = 7283.14; R - 1 = 0.00792$$



## 2.16 base\_CamSpecHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022346	$0.02236^{+0.00032}_{-0.00030}$ (+0.7 $\sigma$ )	$\beta_1^1$	0.06	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	1.04102	$1.04104^{+0.00059}_{-0.00059}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	0.11915	$0.1191^{+0.0027}_{-0.0027}$ (-0.5 $\sigma$ )	$H_0$	67.60	$67.6^{+1.3}_{-1.2}$ (+0.6 $\sigma$ )	$z_{\text{drag}}$	1059.82	$1059.84^{+0.68}_{-0.63}$ (+0.6 $\sigma$ )
$100\theta_{\text{MC}}$	1.04083	$1.04084^{+0.00060}_{-0.00060}$ (+0.2 $\sigma$ )	$\Omega_\Lambda$	0.6890	$0.689^{+0.017}_{-0.017}$ (+0.5 $\sigma$ )	$r_{\text{drag}}$	147.34	$147.34^{+0.61}_{-0.61}$ (+0.2 $\sigma$ )
$\tau$	0.0779	$0.078^{+0.033}_{-0.035}$ (-0.1 $\sigma$ )	$\Omega_m$	0.3110	$0.311^{+0.017}_{-0.017}$ (-0.5 $\sigma$ )	$k_D$	0.14060	$0.14061^{+0.00066}_{-0.00067}$ (+0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.085	$3.086^{+0.065}_{-0.067}$ (-0.2 $\sigma$ )	$\Omega_m h^2$	0.14214	$0.1421^{+0.0026}_{-0.0026}$ (-0.5 $\sigma$ )	$100\theta_D$	0.160785	$0.16077^{+0.00037}_{-0.00038}$ (-0.7 $\sigma$ )
$n_s$	0.9674	$0.9681^{+0.0093}_{-0.0092}$ (+0.7 $\sigma$ )	$\Omega_m h^3$	0.09609	$0.09611^{+0.00061}_{-0.00059}$ (+0.4 $\sigma$ )	$z_{\text{eq}}$	3381	$3380^{+62}_{-62}$ (-0.5 $\sigma$ )
$y_{\text{cal}}$	0.99982	$1.0003^{+0.0048}_{-0.0050}$ (-0.0 $\sigma$ )	$\sigma_8$	0.8260	$0.826^{+0.026}_{-0.027}$ (-0.4 $\sigma$ )	$100\theta_{\text{eq}}$	0.8169	$0.817^{+0.012}_{-0.012}$ (+0.5 $\sigma$ )
$A_{100}^{\text{PS}}$	246.6	$244^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4607	$0.460^{+0.019}_{-0.019}$ (-0.7 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07159	$0.07162^{+0.00095}_{-0.00092}$ (+0.5 $\sigma$ )
$A_{143}^{\text{PS}}$	34.9	$38^{+10}_{-10}$ (-0.7 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6169	$0.617^{+0.021}_{-0.021}$ (-0.6 $\sigma$ )	$H(0.57)$	93.01	$93.04^{+0.56}_{-0.52}$ (+0.6 $\sigma$ )
$A_{217}^{\text{PS}}$	97.3	$99^{+30}_{-30}$ (+0.1 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0046	$1.004^{+0.032}_{-0.033}$ (-0.5 $\sigma$ )	$D_A(0.57)$	1387.6	$1387^{+16}_{-17}$ (-0.6 $\sigma$ )
$A_{217}^{\text{CIB}}$	46.7	$45^{+10}_{-10}$ (-2.8 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.482	$2.481^{+0.076}_{-0.080}$ (-0.6 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.67592	$0.6758^{+0.0043}_{-0.0043}$ (-0.5 $\sigma$ )
$A_{143}^{\text{tSZ}}$	3.51	< 6.82 (-1.1 $\sigma$ )	$z_{\text{re}}$	9.93	$9.8^{+3.1}_{-3.2}$ (-0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4801	$0.480^{+0.016}_{-0.016}$ (-0.5 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.420	$0.52^{+0.23}_{-0.21}$	$10^9 A_s$	2.188	$2.19^{+0.15}_{-0.14}$ (-0.2 $\sigma$ )	$\sigma_8(0.57)$	0.6146	$0.615^{+0.020}_{-0.020}$ (-0.2 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8722	$1.874^{+0.023}_{-0.023}$ (-0.7 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246292	$0.24630^{+0.00013}_{-0.00013}$ (-5.1 $\sigma$ )
$A^{\text{kSZ}}$	4.6	—	$D_{40}$	1228.8	$1229^{+25}_{-25}$ (-0.9 $\sigma$ )	$f_{2000}^{143}$	28.8	$28^{+5}_{-5}$ (-0.4 $\sigma$ )
$A_{100}^{\text{dust}}$	0.978	$0.98^{+0.38}_{-0.38}$	$D_{220}$	5707	$5712^{+76}_{-75}$ (-0.4 $\sigma$ )	$f_{2000}^{217}$	106.16	$106.0^{+3.7}_{-3.7}$ (+0.1 $\sigma$ )
$A_{143}^{\text{dust}}$	1.022	$1.02^{+0.35}_{-0.36}$	$D_{810}$	2527.4	$2530^{+26}_{-26}$ (-0.4 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.27	$31^{+4}_{-4}$ (-0.5 $\sigma$ )
$A_{217}^{\text{dust}}$	1.226	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	813.6	$814.9^{+9.3}_{-9.4}$ (+0.0 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10495.88	$10496.5(\nu: 1.9)$ (-0.6 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.975	$0.98^{+0.35}_{-0.36}$	$n_{s,0.002}$	0.9674	$0.9681^{+0.0093}_{-0.0092}$ (+0.7 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	12935.9	$12952.5(\nu: 18.3)$
$c_{100}$	0.99667	$0.9968^{+0.0019}_{-0.0019}$ (-1.8 $\sigma$ )	$Y_{\text{P}}$	0.244961	$0.24497^{+0.00014}_{-0.00013}$ (-5.1 $\sigma$ )	$\chi_{\text{prior}}^2$	3.7	$8.9(\nu: 6.4)$ (-1.9 $\sigma$ )
$c_{217}$	0.99722	$0.9970^{+0.0034}_{-0.0035}$ (+0.8 $\sigma$ )	Age/Gyr	13.799	$13.797^{+0.049}_{-0.051}$ (-0.6 $\sigma$ )	$\chi_{\text{CMB}}^2$	23431.8	$23448.9(\nu: 17.8)$ (+1575.6 $\sigma$ )
$c_{TE}$	1.0042	$1.0043^{+0.0088}_{-0.0088}$	$z_*$	1089.86	$1089.83^{+0.56}_{-0.56}$ (-0.7 $\sigma$ )			
$c_{EE}$	1.0011	$1.0010^{+0.0083}_{-0.0083}$	$r_*$	144.67	$144.68^{+0.61}_{-0.62}$ (+0.3 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 23435.49$ ;  $\Delta\chi_{\text{eff}}^2 = 10499.93$ ;  $\bar{\chi}_{\text{eff}}^2 = 23457.88$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 10490.19$ ;  $R - 1 = 0.00819$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.88 ( $\Delta$  -1.05) CamSpec like\_v9.10CMH\_unified: 12935.88

## 2.17 base\_CamSpecHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022375	$0.02238^{+0.00029}_{-0.00028}$ (+0.6 $\sigma$ )	$H_0$	67.76	$67.74^{+0.94}_{-0.91}$ (+0.4 $\sigma$ )	$r_{\text{drag}}$	147.40	$147.38^{+0.51}_{-0.51}$ (+0.0 $\sigma$ )
$\Omega_c h^2$	0.11881	$0.1189^{+0.0021}_{-0.0021}$ (-0.3 $\sigma$ )	$\Omega_\Lambda$	0.6911	$0.691^{+0.012}_{-0.012}$ (+0.4 $\sigma$ )	$k_D$	0.14056	$0.14058^{+0.00063}_{-0.00062}$ (+0.2 $\sigma$ )
$100\theta_{\text{MC}}$	1.04087	$1.04087^{+0.00056}_{-0.00056}$ (+0.1 $\sigma$ )	$\Omega_m$	0.3089	$0.309^{+0.012}_{-0.012}$ (-0.4 $\sigma$ )	$100\theta_D$	0.160765	$0.16076^{+0.00037}_{-0.00037}$ (-0.7 $\sigma$ )
$\tau$	0.0794	$0.079^{+0.032}_{-0.033}$ (-0.2 $\sigma$ )	$\Omega_m h^2$	0.14183	$0.1419^{+0.0019}_{-0.0020}$ (-0.3 $\sigma$ )	$z_{\text{eq}}$	3373.9	$3376^{+47}_{-47}$ (-0.3 $\sigma$ )
$\ln(10^{10} A_s)$	3.088	$3.087^{+0.064}_{-0.065}$ (-0.3 $\sigma$ )	$\Omega_m h^3$	0.09611	$0.09611^{+0.00060}_{-0.00060}$ (+0.3 $\sigma$ )	$100\theta_{\text{eq}}$	0.8184	$0.8181^{+0.0089}_{-0.0088}$ (+0.3 $\sigma$ )
$n_s$	0.9685	$0.9686^{+0.0081}_{-0.0080}$ (+0.6 $\sigma$ )	$\sigma_8$	0.8263	$0.826^{+0.026}_{-0.027}$ (-0.4 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07171	$0.07169^{+0.00071}_{-0.00068}$ (+0.4 $\sigma$ )
$y_{\text{cal}}$	1.00006	$1.0003^{+0.0048}_{-0.0051}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4592	$0.459^{+0.017}_{-0.017}$ (-0.5 $\sigma$ )	$H(0.57)$	93.081	$93.08^{+0.44}_{-0.41}$ (+0.5 $\sigma$ )
$A_{100}^{\text{PS}}$	244.4	$244^{+40}_{-40}$ (-0.5 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6160	$0.616^{+0.021}_{-0.021}$ (-0.5 $\sigma$ )	$D_A(0.57)$	1385.5	$1386^{+12}_{-13}$ (-0.4 $\sigma$ )
$A_{143}^{\text{PS}}$	34.2	$38^{+10}_{-10}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0038	$1.004^{+0.033}_{-0.033}$ (-0.5 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.67537	$0.6755^{+0.0032}_{-0.0032}$ (-0.4 $\sigma$ )
$A_{217}^{\text{PS}}$	97.8	$98^{+30}_{-30}$ (+0.1 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.480	$2.480^{+0.076}_{-0.079}$ (-0.6 $\sigma$ )	$f\sigma_8(0.57)$	0.4797	$0.480^{+0.016}_{-0.016}$ (-0.5 $\sigma$ )
$A_{217}^{\text{CIB}}$	46.6	$45^{+10}_{-10}$ (-2.8 $\sigma$ )	$z_{\text{re}}$	10.05	$9.9^{+3.0}_{-3.1}$ (-0.3 $\sigma$ )	$\sigma_8(0.57)$	0.6153	$0.615^{+0.020}_{-0.020}$ (-0.3 $\sigma$ )
$A_{143}^{\text{tSZ}}$	3.87	< 6.81 (-1.1 $\sigma$ )	$10^9 A_s$	2.194	$2.19^{+0.14}_{-0.14}$ (-0.3 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246305	$0.24630^{+0.00012}_{-0.00012}$ (-6.0 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.430	$0.52^{+0.23}_{-0.22}$	$10^9 A_s e^{-2\tau}$	1.8717	$1.873^{+0.021}_{-0.022}$ (-0.6 $\sigma$ )	$f_{2000}^{143}$	28.3	$28^{+5}_{-5}$ (-0.4 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1227.6	$1229^{+24}_{-25}$ (-0.9 $\sigma$ )	$f_{2000}^{217}$	105.96	$105.9^{+3.6}_{-3.8}$ (+0.1 $\sigma$ )
$A^{\text{kSZ}}$	4.1	—	$D_{220}$	5710	$5713^{+75}_{-75}$ (-0.5 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.04	$31^{+4}_{-4}$ (-0.5 $\sigma$ )
$A_{100}^{\text{dust}}$	1.001	$0.98^{+0.38}_{-0.37}$	$D_{810}$	2528.7	$2530^{+26}_{-27}$ (-0.3 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10495.81	$10496.4 (\nu: 2.0)$ (-0.6 $\sigma$ )
$A_{143}^{\text{dust}}$	1.025	$1.02^{+0.35}_{-0.36}$	$D_{1420}$	814.4	$815.0^{+9.4}_{-9.4}$ (+0.0 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	12936.1	$12952.1 (\nu: 17.4)$
$A_{217}^{\text{dust}}$	1.227	$1.22^{+0.23}_{-0.23}$	$n_{s,0.002}$	0.9685	$0.9686^{+0.0081}_{-0.0080}$ (+0.6 $\sigma$ )	$\chi_{6\text{DF}}^2$	0.015	$0.046 (\nu: 0.0)$ (-0.3 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.984	$0.98^{+0.34}_{-0.36}$	$Y_{\text{P}}$	0.244974	$0.24498^{+0.00013}_{-0.00012}$ (-6.0 $\sigma$ )	$\chi_{\text{MGS}}^2$	1.34	$1.38 (\nu: 0.1)$ (+0.4 $\sigma$ )
$c_{100}$	0.99678	$0.9968^{+0.0019}_{-0.0019}$ (-1.7 $\sigma$ )	Age/Gyr	13.7933	$13.794^{+0.041}_{-0.043}$ (-0.5 $\sigma$ )	$\chi_{\text{DR11CMass}}^2$	2.43	$2.76 (\nu: 0.1)$ (-0.2 $\sigma$ )
$c_{217}$	0.99718	$0.9971^{+0.0035}_{-0.0034}$ (+0.8 $\sigma$ )	$z_*$	1089.792	$1089.80^{+0.46}_{-0.47}$ (-0.6 $\sigma$ )	$\chi_{\text{DR11LOWZ}}^2$	0.55	$0.67 (\nu: 0.1)$ (-0.3 $\sigma$ )
$c_{\text{TE}}$	1.0043	$1.0043^{+0.0089}_{-0.0087}$	$r_*$	144.737	$144.72^{+0.48}_{-0.49}$ (+0.1 $\sigma$ )	$\chi_{\text{prior}}^2$	3.6	$8.9 (\nu: 6.2)$ (-1.9 $\sigma$ )
$c_{\text{EE}}$	1.0010	$1.0010^{+0.0085}_{-0.0084}$	$100\theta_*$	1.04107	$1.04106^{+0.00055}_{-0.00056}$ (+0.1 $\sigma$ )	$\chi_{\text{CMB}}^2$	23431.9	$23448.5 (\nu: 16.9)$ (+1580.3 $\sigma$ )
$\beta_1^1$	-0.16	$-0.1^{+1.9}_{-1.9}$	$z_{\text{drag}}$	1059.86	$1059.85^{+0.65}_{-0.63}$ (+0.5 $\sigma$ )	$\chi_{\text{BAO}}^2$	4.34	$4.84 (\nu: 0.2)$ (-0.2 $\sigma$ )

Best-fit  $\chi_{\text{eff}}^2 = 23439.85$ ;  $\Delta\chi_{\text{eff}}^2 = 10499.69$ ;  $\bar{\chi}_{\text{eff}}^2 = 23462.28$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 10489.81$ ;  $R - 1 = 0.00944$   
 $\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 ( $\Delta$  -0.01) MGS: 1.34 ( $\Delta$  0.13) DR11CMass: 2.43 ( $\Delta$  -0.06) DR11LOWZ: 0.55 ( $\Delta$  -0.13) CMB - lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.81 ( $\Delta$  -1.61) CamSpec like\_v9.10CMH\_unified: 12936.11

## 2.18 base\_CamSpecHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00032}_{-0.00030} \quad (+0.7\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.04105^{+0.00059}_{-0.00059} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1189^{+0.0027}_{-0.0026} \quad (-0.5\sigma)$	$H_0$	$67.7^{+1.2}_{-1.2} \quad (+0.5\sigma)$	$z_{\text{drag}}$	$1059.85^{+0.67}_{-0.64} \quad (+0.6\sigma)$
$100\theta_{\text{MC}}$	$1.04086^{+0.00060}_{-0.00060} \quad (+0.2\sigma)$	$\Omega_\Lambda$	$0.690^{+0.016}_{-0.016} \quad (+0.5\sigma)$	$r_{\text{drag}}$	$147.37^{+0.59}_{-0.60} \quad (+0.2\sigma)$
$\tau$	$0.078^{+0.033}_{-0.035} \quad (-0.1\sigma)$	$\Omega_m$	$0.310^{+0.016}_{-0.016} \quad (-0.5\sigma)$	$k_D$	$0.14059^{+0.00066}_{-0.00067} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.087^{+0.065}_{-0.067} \quad (-0.3\sigma)$	$\Omega_m h^2$	$0.1420^{+0.0025}_{-0.0025} \quad (-0.4\sigma)$	$100\theta_D$	$0.16076^{+0.00037}_{-0.00037} \quad (-0.7\sigma)$
$n_s$	$0.9684^{+0.0090}_{-0.0091} \quad (+0.7\sigma)$	$\Omega_m h^3$	$0.09612^{+0.00060}_{-0.00059} \quad (+0.4\sigma)$	$z_{\text{eq}}$	$3377^{+60}_{-59} \quad (-0.4\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0048}_{-0.0051} \quad (-0.0\sigma)$	$\sigma_8$	$0.826^{+0.026}_{-0.027} \quad (-0.4\sigma)$	$100\theta_{\text{eq}}$	$0.818^{+0.011}_{-0.011} \quad (+0.5\sigma)$
$A_{100}^{\text{PS}}$	$244^{+40}_{-40} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.019}_{-0.018} \quad (-0.6\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07167^{+0.00092}_{-0.00088} \quad (+0.5\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.616^{+0.021}_{-0.021} \quad (-0.6\sigma)$	$H(0.57)$	$93.07^{+0.54}_{-0.51} \quad (+0.6\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.004^{+0.033}_{-0.033} \quad (-0.5\sigma)$	$D_A(0.57)$	$1386^{+16}_{-16} \quad (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.480^{+0.077}_{-0.081} \quad (-0.6\sigma)$	$F_{\text{AP}}(0.57)$	$0.6756^{+0.0041}_{-0.0041} \quad (-0.5\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.84 \quad (-1.1\sigma)$	$z_{\text{re}}$	$9.9^{+3.1}_{-3.1} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.480^{+0.016}_{-0.016} \quad (-0.5\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.22}$	$10^9 A_s$	$2.19^{+0.15}_{-0.14} \quad (-0.3\sigma)$	$\sigma_8(0.57)$	$0.615^{+0.020}_{-0.020} \quad (-0.3\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.873^{+0.022}_{-0.023} \quad (-0.7\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24630^{+0.00013}_{-0.00013} \quad (-5.2\sigma)$
$A^{\text{kSZ}}$	—	$D_{40}$	$1229^{+25}_{-25} \quad (-0.9\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.38}_{-0.37}$	$D_{220}$	$5713^{+76}_{-75} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$105.9^{+3.6}_{-3.8} \quad (+0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$D_{810}$	$2530^{+26}_{-26} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.5\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	$815.0^{+9.4}_{-9.4} \quad (+0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.5 \quad (\nu: 2.0) \quad (-0.6\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.36}$	$n_{s,0.002}$	$0.9684^{+0.0090}_{-0.0091} \quad (+0.7\sigma)$	$\chi_{\text{CamSpec}}^2$	$12952.4 \quad (\nu: 17.9)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.7\sigma)$	$Y_{\text{P}}$	$0.24497^{+0.00014}_{-0.00013} \quad (-5.3\sigma)$	$\chi_{\text{JLA}}^2$	$706.76 \quad (\nu: 0.0) \quad (-0.4\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0035} \quad (+0.8\sigma)$	$\text{Age/Gyr}$	$13.794^{+0.048}_{-0.049} \quad (-0.6\sigma)$	$\chi_{\text{prior}}^2$	$8.9 \quad (\nu: 6.3) \quad (-1.9\sigma)$
$c_{TE}$	$1.0043^{+0.0088}_{-0.0088}$	$z_*$	$1089.81^{+0.55}_{-0.55} \quad (-0.7\sigma)$	$\chi_{\text{CMB}}^2$	$23448.9 \quad (\nu: 17.4) \quad (+1567.3\sigma)$
$c_{EE}$	$1.0010^{+0.0085}_{-0.0083}$	$r_*$	$144.71^{+0.59}_{-0.59} \quad (+0.3\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 24164.57; \Delta\bar{\chi}_{\text{eff}}^2 = 10489.94; R - 1 = 0.00842$$

## 2.19 base\_CamSpecHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00032}_{-0.00030} \quad (+0.7\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.04106^{+0.00059}_{-0.00059} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1189^{+0.0027}_{-0.0027} \quad (-0.5\sigma)$	$H_0$	$67.7^{+1.2}_{-1.2} \quad (+0.5\sigma)$	$z_{\text{drag}}$	$1059.86^{+0.66}_{-0.60} \quad (+0.6\sigma)$
$100\theta_{\text{MC}}$	$1.04087^{+0.00060}_{-0.00060} \quad (+0.2\sigma)$	$\Omega_\Lambda$	$0.691^{+0.016}_{-0.017} \quad (+0.5\sigma)$	$r_{\text{drag}}$	$147.38^{+0.60}_{-0.61} \quad (+0.2\sigma)$
$\tau$	$0.079^{+0.033}_{-0.034} \quad (-0.1\sigma)$	$\Omega_m$	$0.309^{+0.017}_{-0.016} \quad (-0.5\sigma)$	$k_D$	$0.14059^{+0.00067}_{-0.00067} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.087^{+0.065}_{-0.067} \quad (-0.3\sigma)$	$\Omega_m h^2$	$0.1419^{+0.0025}_{-0.0025} \quad (-0.4\sigma)$	$100\theta_D$	$0.16076^{+0.00037}_{-0.00037} \quad (-0.7\sigma)$
$n_s$	$0.9686^{+0.0091}_{-0.0091} \quad (+0.7\sigma)$	$\Omega_m h^3$	$0.09612^{+0.00060}_{-0.00059} \quad (+0.4\sigma)$	$z_{\text{eq}}$	$3376^{+61}_{-60} \quad (-0.4\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0048}_{-0.0051} \quad (-0.0\sigma)$	$\sigma_8$	$0.826^{+0.026}_{-0.027} \quad (-0.4\sigma)$	$100\theta_{\text{eq}}$	$0.818^{+0.012}_{-0.012} \quad (+0.5\sigma)$
$A_{100}^{\text{PS}}$	$244^{+40}_{-40} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.019}_{-0.019} \quad (-0.6\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07169^{+0.00093}_{-0.00090} \quad (+0.5\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.616^{+0.021}_{-0.021} \quad (-0.6\sigma)$	$H(0.57)$	$93.08^{+0.55}_{-0.52} \quad (+0.6\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.004^{+0.033}_{-0.034} \quad (-0.5\sigma)$	$D_A(0.57)$	$1386^{+16}_{-16} \quad (-0.6\sigma)$
$A_{217}^{\text{CIB}}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.480^{+0.077}_{-0.081} \quad (-0.6\sigma)$	$F_{\text{AP}}(0.57)$	$0.6755^{+0.0042}_{-0.0041} \quad (-0.5\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.85 \quad (-1.1\sigma)$	$z_{\text{re}}$	$9.9^{+3.1}_{-3.1} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.480^{+0.016}_{-0.016} \quad (-0.5\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.22}$	$10^9 A_s$	$2.19^{+0.15}_{-0.14} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.615^{+0.020}_{-0.020} \quad (-0.3\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.873^{+0.023}_{-0.022} \quad (-0.7\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24631^{+0.00013}_{-0.00013} \quad (-5.2\sigma)$
$A^{\text{kSZ}}$	—	$D_{40}$	$1229^{+25}_{-25} \quad (-0.9\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.38}_{-0.37}$	$D_{220}$	$5713^{+76}_{-75} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$105.9^{+3.6}_{-3.8} \quad (+0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$D_{810}$	$2530^{+26}_{-26} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.5\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	$815.1^{+9.4}_{-9.4} \quad (+0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.5 \quad (\nu: 2.0) \quad (-0.6\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.36}$	$n_{s,0.002}$	$0.9686^{+0.0091}_{-0.0091} \quad (+0.7\sigma)$	$\chi_{\text{CamSpec}}^2$	$12952.4 \quad (\nu: 18.0)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.7\sigma)$	$Y_{\text{P}}$	$0.24498^{+0.00014}_{-0.00013} \quad (-5.2\sigma)$	$\chi_{\text{H070p6}}^2$	$0.77 \quad (\nu: 0.1) \quad (-0.5\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0035} \quad (+0.8\sigma)$	$\text{Age/Gyr}$	$13.793^{+0.049}_{-0.050} \quad (-0.6\sigma)$	$\chi_{\text{prior}}^2$	$8.9 \quad (\nu: 6.3) \quad (-1.9\sigma)$
$c_{TE}$	$1.0043^{+0.0088}_{-0.0088}$	$z_*$	$1089.79^{+0.55}_{-0.56} \quad (-0.7\sigma)$	$\chi_{\text{CMB}}^2$	$23448.9 \quad (\nu: 17.5) \quad (+1565.6\sigma)$
$c_{EE}$	$1.0010^{+0.0085}_{-0.0083}$	$r_*$	$144.72^{+0.60}_{-0.60} \quad (+0.3\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 23458.63; \Delta\bar{\chi}_{\text{eff}}^2 = 10489.88; R - 1 = 0.00847$$

## 2.20 base\_CamSpecHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00032}_{-0.00030} \quad (+0.7\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.04104^{+0.00059}_{-0.00060} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1191^{+0.0027}_{-0.0027} \quad (-0.5\sigma)$	$H_0$	$67.7^{+1.3}_{-1.2} \quad (+0.6\sigma)$	$z_{\text{drag}}$	$1059.84^{+0.66}_{-0.62} \quad (+0.6\sigma)$
$100\theta_{\text{MC}}$	$1.04084^{+0.00060}_{-0.00061} \quad (+0.2\sigma)$	$\Omega_\Lambda$	$0.689^{+0.016}_{-0.017} \quad (+0.5\sigma)$	$r_{\text{drag}}$	$147.35^{+0.61}_{-0.61} \quad (+0.2\sigma)$
$\tau$	$0.079^{+0.031}_{-0.032} \quad (-0.1\sigma)$	$\Omega_m$	$0.311^{+0.017}_{-0.016} \quad (-0.5\sigma)$	$k_D$	$0.14061^{+0.00066}_{-0.00068} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.088^{+0.061}_{-0.062} \quad (-0.2\sigma)$	$\Omega_m h^2$	$0.1421^{+0.0026}_{-0.0025} \quad (-0.5\sigma)$	$100\theta_D$	$0.16077^{+0.00037}_{-0.00037} \quad (-0.8\sigma)$
$n_s$	$0.9681^{+0.0091}_{-0.0091} \quad (+0.7\sigma)$	$\Omega_m h^3$	$0.09612^{+0.00061}_{-0.00059} \quad (+0.4\sigma)$	$z_{\text{eq}}$	$3380^{+61}_{-61} \quad (-0.5\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0048}_{-0.0051} \quad (-0.0\sigma)$	$\sigma_8$	$0.827^{+0.025}_{-0.025} \quad (-0.4\sigma)$	$100\theta_{\text{eq}}$	$0.817^{+0.012}_{-0.011} \quad (+0.5\sigma)$
$A_{100}^{\text{PS}}$	$244^{+40}_{-40} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.461^{+0.019}_{-0.018} \quad (-0.6\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07162^{+0.00094}_{-0.00090} \quad (+0.5\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.617^{+0.021}_{-0.020} \quad (-0.6\sigma)$	$H(0.57)$	$93.04^{+0.55}_{-0.52} \quad (+0.6\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.005^{+0.032}_{-0.031} \quad (-0.5\sigma)$	$D_A(0.57)$	$1387^{+16}_{-17} \quad (-0.6\sigma)$
$A_{217}^{\text{CIB}}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.483^{+0.075}_{-0.074} \quad (-0.6\sigma)$	$F_{\text{AP}}(0.57)$	$0.6758^{+0.0042}_{-0.0042} \quad (-0.5\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.84 \quad (-1.1\sigma)$	$z_{\text{re}}$	$9.9^{+2.8}_{-2.8} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.480^{+0.015}_{-0.015} \quad (-0.5\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.22}$	$10^9 A_s$	$2.19^{+0.13}_{-0.14} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.615^{+0.019}_{-0.019} \quad (-0.2\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.874^{+0.023}_{-0.023} \quad (-0.7\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24630^{+0.00013}_{-0.00013} \quad (-5.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{40}$	$1230^{+25}_{-25} \quad (-0.9\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.38}_{-0.38}$	$D_{220}$	$5712^{+76}_{-75} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$105.9^{+3.6}_{-3.7} \quad (+0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$D_{810}$	$2530^{+26}_{-26} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.5\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	$814.9^{+9.5}_{-9.4} \quad (+0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.5 \quad (\nu: 2.0) \quad (-0.6\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.36}$	$n_{s,0.002}$	$0.9681^{+0.0091}_{-0.0091} \quad (+0.7\sigma)$	$\chi_{\text{CamSpec}}^2$	$12952.3 \quad (\nu: 17.7)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.7\sigma)$	$Y_{\text{P}}$	$0.24497^{+0.00014}_{-0.00013} \quad (-5.2\sigma)$	$\chi_{\text{prior}}^2$	$9.0 \quad (\nu: 6.3) \quad (-1.9\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0035} \quad (+0.8\sigma)$	$\text{Age/Gyr}$	$13.796^{+0.049}_{-0.050} \quad (-0.6\sigma)$	$\chi_{\text{CMB}}^2$	$23448.8 \quad (\nu: 17.2) \quad (+1574.6\sigma)$
$c_{TE}$	$1.0042^{+0.0087}_{-0.0088}$	$z_*$	$1089.83^{+0.56}_{-0.56} \quad (-0.7\sigma)$		
$c_{EE}$	$1.0009^{+0.0085}_{-0.0083}$	$r_*$	$144.68^{+0.61}_{-0.61} \quad (+0.3\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 23457.74; \Delta\bar{\chi}_{\text{eff}}^2 = 10490.05; R - 1 = 0.00797$$

## 2.21 base\_plikHM\_TE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022396	$0.02239^{+0.00050}_{-0.00049}$	$\sigma_8 \Omega_m^{0.5}$	0.4456	$0.445^{+0.030}_{-0.029}$	$D_A/\text{Gpc}$	13.919	$13.926^{+0.087}_{-0.086}$
$\Omega_c h^2$	0.11803	$0.1177^{+0.0039}_{-0.0038}$	$\sigma_8 \Omega_m^{0.25}$	0.5999	$0.599^{+0.034}_{-0.032}$	$z_{\text{drag}}$	1059.86	$1059.8^{+1.1}_{-1.1}$
$100\theta_{\text{MC}}$	1.04099	$1.0410^{+0.0010}_{-0.0010}$	$\sigma_8/h^{0.5}$	0.979	$0.978^{+0.052}_{-0.049}$	$r_{\text{drag}}$	147.59	$147.67^{+0.96}_{-0.96}$
$\tau$	0.0611	$0.061^{+0.041}_{-0.044}$	$\langle d^2 \rangle^{1/2}$	2.413	$2.41^{+0.11}_{-0.10}$	$k_D$	0.14037	$0.1403^{+0.0011}_{-0.0011}$
$\ln(10^{10} A_s)$	3.047	$3.048^{+0.088}_{-0.093}$	$z_{\text{re}}$	8.32	$8.2^{+3.9}_{-4.4}$	$100\theta_D$	0.16079	$0.16082^{+0.00063}_{-0.00062}$
$n_s$	0.9727	$0.975^{+0.020}_{-0.020}$	$10^9 A_s$	2.104	$2.11^{+0.19}_{-0.19}$	$z_{\text{eq}}$	3356	$3349^{+88}_{-87}$
$y_{\text{cal}}$	0.99997	$1.0001^{+0.0049}_{-0.0049}$	$10^9 A_s e^{-2\tau}$	1.8623	$1.863^{+0.037}_{-0.037}$	$k_{\text{eq}}$	0.010242	$0.01022^{+0.00027}_{-0.00026}$
$A_{100}^{\text{dustTE}}$	0.136	$0.137^{+0.073}_{-0.075}$	$D_{40}$	1206.0	$1204^{+45}_{-42}$	$100\theta_{\text{eq}}$	0.8218	$0.823^{+0.017}_{-0.017}$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.133^{+0.057}_{-0.058}$	$D_{220}$	5679	$5679^{+110}_{-100}$	$100\theta_{s,\text{eq}}$	0.4538	$0.4545^{+0.0087}_{-0.0086}$
$A_{100 \times 217}^{\text{dustTE}}$	0.305	$0.30^{+0.17}_{-0.17}$	$D_{810}$	2523	$2526^{+50}_{-49}$	$r_{\text{drag}}/D_V(0.57)$	0.07198	$0.0721^{+0.0013}_{-0.0013}$
$A_{143}^{\text{dustTE}}$	0.147	$0.15^{+0.11}_{-0.10}$	$D_{1420}$	814.4	$816^{+23}_{-22}$	$H(0.57)$	93.21	$93.25^{+0.81}_{-0.77}$
$A_{143 \times 217}^{\text{dustTE}}$	0.325	$0.33^{+0.16}_{-0.16}$	$D_{2000}$	230.3	$230.9^{+8.7}_{-8.3}$	$D_A(0.57)$	1381.2	$1380^{+23}_{-23}$
$A_{217}^{\text{dustTE}}$	1.62	$1.65^{+0.51}_{-0.50}$	$n_{s,0.002}$	0.9727	$0.975^{+0.020}_{-0.020}$	$F_{\text{AP}}(0.57)$	0.6742	$0.6738^{+0.0060}_{-0.0058}$
$c_{100}$	0.99931	$0.9992^{+0.0019}_{-0.0020}$	$Y_P$	0.245404	$0.24540^{+0.00022}_{-0.00022}$	$f\sigma_8(0.57)$	0.4678	$0.467^{+0.025}_{-0.024}$
$H_0$	68.09	$68.2^{+1.7}_{-1.7}$	$Y_P^{\text{BBN}}$	0.246731	$0.24673^{+0.00022}_{-0.00022}$	$\sigma_8(0.57)$	0.6027	$0.603^{+0.029}_{-0.030}$
$\Omega_\Lambda$	0.6958	$0.697^{+0.022}_{-0.024}$	$10^5 D/H$	2.587	$2.588^{+0.093}_{-0.091}$	$\chi_{\text{lowTEB}}^2$	10493.50	$10494.5 (\nu: 1.8)$
$\Omega_m$	0.3042	$0.303^{+0.024}_{-0.022}$	Age/Gyr	13.785	$13.782^{+0.075}_{-0.076}$	$\chi_{\text{plikTE}}^2$	931.7	$938.8 (\nu: 8.1)$
$\Omega_m h^2$	0.14107	$0.1408^{+0.0037}_{-0.0036}$	$z_*$	1089.72	$1089.70^{+0.82}_{-0.80}$	$\chi_{\text{prior}}^2$	1.9	$7.9 (\nu: 6.7)$
$\Omega_m h^3$	0.09606	$0.0960^{+0.0010}_{-0.0010}$	$r_*$	144.92	$145.00^{+0.92}_{-0.93}$	$\chi_{\text{CMB}}^2$	11425.2	$11433.3 (\nu: 8.4)$
$\sigma_8$	0.8078	$0.808^{+0.040}_{-0.040}$	$100\theta_*$	1.04116	$1.0412^{+0.0010}_{-0.0010}$			

Best-fit  $\chi_{\text{eff}}^2 = 11427.16$ ;  $\bar{\chi}_{\text{eff}}^2 = 11441.18$ ;  $R - 1 = 0.00601$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.50 plik\_dx11dr2\_HM\_v18\_TE: 931.73

## 2.22 base\_plikHM\_EE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02417	$0.0242^{+0.0027}_{-0.0027}$	$\sigma_8 \Omega_m^{0.25}$	0.571	$0.572^{+0.063}_{-0.062}$	$z_{\text{drag}}$	1063.4	$1063.4^{+5.2}_{-5.4}$
$\Omega_c h^2$	0.1123	$0.1125^{+0.0097}_{-0.0095}$	$\sigma_8/h^{0.5}$	0.938	$0.940^{+0.093}_{-0.085}$	$r_{\text{drag}}$	147.16	$147.1^{+1.5}_{-1.5}$
$100\theta_{\text{MC}}$	1.04007	$1.0401^{+0.0018}_{-0.0019}$	$\langle d^2 \rangle^{1/2}$	2.349	$2.35^{+0.17}_{-0.17}$	$k_{\text{D}}$	0.14201	$0.1420^{+0.0027}_{-0.0029}$
$\tau$	0.0651	$0.066^{+0.043}_{-0.042}$	$z_{\text{re}}$	8.19	$8.2^{+3.7}_{-4.1}$	$100\theta_{\text{D}}$	0.15862	$0.1587^{+0.0029}_{-0.0027}$
$\ln(10^{10} A_s)$	3.072	$3.074^{+0.089}_{-0.088}$	$10^9 A_s$	2.158	$2.16^{+0.19}_{-0.20}$	$z_{\text{eq}}$	3261	$3266^{+180}_{-160}$
$n_s$	0.9867	$0.988^{+0.028}_{-0.027}$	$10^9 A_s e^{-2\tau}$	1.895	$1.895^{+0.052}_{-0.051}$	$k_{\text{eq}}$	0.00995	$0.00997^{+0.00056}_{-0.00050}$
$y_{\text{cal}}$	0.99998	$1.0000^{+0.0048}_{-0.0050}$	$D_{40}$	1223	$1221^{+59}_{-57}$	$100\theta_{\text{eq}}$	0.8440	$0.844^{+0.039}_{-0.041}$
$A_{100}^{\text{dustEE}}$	0.0824	$0.083^{+0.011}_{-0.012}$	$D_{220}$	6000	$5990^{+420}_{-430}$	$100\theta_{\text{s,eq}}$	0.4639	$0.464^{+0.019}_{-0.019}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0499	$0.050^{+0.010}_{-0.011}$	$D_{810}$	2593	$2592^{+81}_{-85}$	$r_{\text{drag}}/D_{\text{V}}(0.57)$	0.07385	$0.0739^{+0.0037}_{-0.0037}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.099^{+0.064}_{-0.063}$	$D_{1420}$	846.8	$846^{+38}_{-41}$	$H(0.57)$	95.03	$95.1^{+3.6}_{-3.3}$
$A_{143}^{\text{dustEE}}$	0.1015	$0.101^{+0.014}_{-0.014}$	$D_{2000}$	242.4	$242^{+15}_{-16}$	$D_{\text{A}}(0.57)$	1336	$1337^{+82}_{-76}$
$A_{143 \times 217}^{\text{dustEE}}$	0.223	$0.223^{+0.091}_{-0.091}$	$n_{\text{s},0.002}$	0.9867	$0.988^{+0.028}_{-0.027}$	$F_{\text{AP}}(0.57)$	0.6649	$0.665^{+0.016}_{-0.016}$
$A_{217}^{\text{dustEE}}$	0.650	$0.64^{+0.25}_{-0.25}$	$Y_{\text{P}}$	0.24615	$0.2461^{+0.0010}_{-0.0011}$	$f\sigma_8(0.57)$	0.4487	$0.449^{+0.043}_{-0.042}$
$H_0$	71.4	$71.4^{+5.8}_{-5.9}$	$Y_{\text{P}}^{\text{BBN}}$	0.24748	$0.2475^{+0.0010}_{-0.0011}$	$\sigma_8(0.57)$	0.6000	$0.600^{+0.031}_{-0.029}$
$\Omega_{\Lambda}$	0.731	$0.729^{+0.057}_{-0.061}$	$10^5 \text{D}/\text{H}$	2.287	$2.30^{+0.44}_{-0.41}$	$\chi^2_{\text{lowTEB}}$	10493.61	$10494.8 (\nu: 2.4)$
$\Omega_{\text{m}}$	0.269	$0.271^{+0.061}_{-0.057}$	Age/Gyr	13.606	$13.60^{+0.33}_{-0.33}$	$\chi^2_{\text{plikEE}}$	751.2	$758.7 (\nu: 10.1)$
$\Omega_{\text{m}} h^2$	0.1371	$0.1373^{+0.0076}_{-0.0069}$	$z_*$	1087.18	$1087.3^{+3.7}_{-3.6}$	$\chi^2_{\text{prior}}$	4.0	$8.3 (\nu: 6.4)$
$\Omega_{\text{m}} h^3$	0.09786	$0.0979^{+0.0039}_{-0.0038}$	$r_*$	145.06	$145.0^{+1.3}_{-1.3}$	$\chi^2_{\text{CMB}}$	11244.8	$11253.5 (\nu: 10.8)$
$\sigma_8$	0.792	$0.793^{+0.051}_{-0.049}$	$100\theta_*$	1.04007	$1.0401^{+0.0017}_{-0.0018}$			
$\sigma_8 \Omega_{\text{m}}^{0.5}$	0.411	$0.413^{+0.067}_{-0.065}$	$D_{\text{A}}/\text{Gpc}$	13.947	$13.94^{+0.12}_{-0.12}$			

Best-fit  $\chi^2_{\text{eff}} = 11248.79$ ;  $\bar{\chi}^2_{\text{eff}} = 11261.82$ ;  $R - 1 = 0.00601$

$\chi^2_{\text{eff}}$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.61 plik\_dx11dr2\_HM\_v18\_EE: 751.20

## 2.23 base\_CamSpecHM\_TE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022401	$0.02241^{+0.00048}_{-0.00048}$ (+0.1 $\sigma$ )	$\sigma_8/h^{0.5}$	0.963	$0.970^{+0.051}_{-0.049}$ (-0.3 $\sigma$ )	$r_{\text{drag}}$	148.09	$148.04^{+0.98}_{-1.0}$ (+0.8 $\sigma$ )
$\Omega_c h^2$	0.11613	$0.1163^{+0.0040}_{-0.0038}$ (-0.7 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.362	$2.37^{+0.11}_{-0.11}$ (-0.6 $\sigma$ )	$k_D$	0.13986	$0.1399^{+0.0012}_{-0.0011}$ (-0.6 $\sigma$ )
$100\theta_{\text{MC}}$	1.04131	$1.04134^{+0.00094}_{-0.00096}$ (+0.6 $\sigma$ )	$z_{\text{re}}$	8.26	$8.5^{+4.0}_{-4.4}$ (+0.1 $\sigma$ )	$100\theta_D$	0.16088	$0.16087^{+0.00063}_{-0.00060}$ (+0.2 $\sigma$ )
$\tau$	0.0608	$0.065^{+0.042}_{-0.043}$ (+0.1 $\sigma$ )	$10^9 A_s$	2.080	$2.10^{+0.19}_{-0.20}$ (-0.1 $\sigma$ )	$z_{\text{eq}}$	3310	$3315^{+93}_{-88}$ (-0.8 $\sigma$ )
$\ln(10^{10} A_s)$	3.035	$3.045^{+0.089}_{-0.092}$ (-0.1 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.842	$1.847^{+0.052}_{-0.050}$ (-0.9 $\sigma$ )	$100\theta_{\text{eq}}$	0.8305	$0.830^{+0.017}_{-0.018}$ (+0.8 $\sigma$ )
$n_s$	0.9812	$0.982^{+0.021}_{-0.020}$ (+0.7 $\sigma$ )	$D_{40}$	1177.1	$1180^{+46}_{-44}$ (-1.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07266	$0.0726^{+0.0014}_{-0.0014}$ (+0.8 $\sigma$ )
$y_{\text{cal}}$	0.9999	$0.99997^{+0.0050}_{-0.0049}$ (-0.0 $\sigma$ )	$D_{220}$	5618	$5625^{+150}_{-150}$ (-1.0 $\sigma$ )	$H(0.57)$	93.50	$93.51^{+0.79}_{-0.76}$ (+0.6 $\sigma$ )
$c_{TE}$	0.9981	$0.999^{+0.019}_{-0.019}$	$D_{810}$	2508	$2515^{+71}_{-70}$ (-0.4 $\sigma$ )	$D_A(0.57)$	1371.0	$1371^{+23}_{-22}$ (-0.7 $\sigma$ )
$H_0$	68.89	$68.9^{+1.7}_{-1.7}$ (+0.7 $\sigma$ )	$D_{1420}$	812.5	$815^{+29}_{-28}$ (-0.1 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6713	$0.6715^{+0.0060}_{-0.0056}$ (-0.7 $\sigma$ )
$\Omega_\Lambda$	0.7068	$0.706^{+0.021}_{-0.024}$ (+0.7 $\sigma$ )	$n_{s,0.002}$	0.9812	$0.982^{+0.021}_{-0.020}$ (+0.7 $\sigma$ )	$f\sigma_8(0.57)$	0.4600	$0.463^{+0.025}_{-0.024}$ (-0.4 $\sigma$ )
$\Omega_m$	0.2932	$0.294^{+0.024}_{-0.021}$ (-0.7 $\sigma$ )	$Y_P$	0.244985	$0.24499^{+0.00021}_{-0.00020}$ (-3.6 $\sigma$ )	$\sigma_8(0.57)$	0.5991	$0.603^{+0.030}_{-0.029}$ (-0.0 $\sigma$ )
$\Omega_m h^2$	0.13917	$0.1394^{+0.0039}_{-0.0037}$ (-0.8 $\sigma$ )	Age/Gyr	13.765	$13.764^{+0.069}_{-0.071}$ (-0.5 $\sigma$ )	$Y_P^{\text{BBN}}$	0.246316	$0.24632^{+0.00020}_{-0.00021}$ (-3.6 $\sigma$ )
$\Omega_m h^3$	0.09588	$0.0959^{+0.0010}_{-0.00098}$ (-0.1 $\sigma$ )	$z_*$	1089.53	$1089.53^{+0.79}_{-0.76}$ (-0.4 $\sigma$ )	$\chi^2_{\text{lowTEB}}$	10492.11	$10493.3$ ( $\nu$ : 1.1) (-0.6 $\sigma$ )
$\sigma_8$	0.7993	$0.804^{+0.040}_{-0.039}$ (-0.2 $\sigma$ )	$r_*$	145.42	$145.37^{+0.94}_{-0.98}$ (+0.8 $\sigma$ )	$\chi^2_{\text{CamSpec}}$	2694.7	$2699.5$ ( $\nu$ : 4.9)
$\sigma_8 \Omega_m^{0.5}$	0.4328	$0.436^{+0.029}_{-0.028}$ (-0.5 $\sigma$ )	$100\theta_*$	1.04151	$1.04153^{+0.00093}_{-0.00096}$ (+0.6 $\sigma$ )	$\chi^2_{\text{prior}}$	10.00	$12.0$ ( $\nu$ : 2.1) (+1.1 $\sigma$ )
$\sigma_8 \Omega_m^{0.25}$	0.5882	$0.592^{+0.033}_{-0.032}$ (-0.4 $\sigma$ )	$z_{\text{drag}}$	1059.70	$1059.8^{+1.1}_{-1.0}$ (-0.1 $\sigma$ )	$\chi^2_{\text{CMB}}$	13186.9	$13192.8$ ( $\nu$ : 5.8) (+430.1 $\sigma$ )

Best-fit  $\chi^2_{\text{eff}} = 13196.86$ ;  $\Delta\chi^2_{\text{eff}} = 1769.70$ ;  $\bar{\chi}^2_{\text{eff}} = 13204.81$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 1763.63$ ;  $R - 1 = 0.00710$

$\chi^2_{\text{eff}}$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10492.11 ( $\Delta$  -1.39) CamSpec like\_v9.10CMH\_unified: 2694.75



## 2.24 base\_CamSpecHM\_EE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02413	$0.0241^{+0.0022}_{-0.0021}$ $(-0.0\sigma)$	$\sigma_8/h^{0.5}$	0.946	$0.947^{+0.076}_{-0.074}$ $(+0.2\sigma)$	$r_{\text{drag}}$	146.56	$146.5^{+1.2}_{-1.2}$ $(-0.8\sigma)$
$\Omega_c h^2$	0.1147	$0.1148^{+0.0080}_{-0.0076}$ $(+0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	2.381	$2.38^{+0.15}_{-0.14}$ $(+0.4\sigma)$	$k_D$	0.14266	$0.1427^{+0.0021}_{-0.0022}$ $(+0.5\sigma)$
$100\theta_{\text{MC}}$	1.03990	$1.0399^{+0.0014}_{-0.0014}$ $(-0.3\sigma)$	$z_{\text{re}}$	7.83	$7.7^{+3.8}_{-4.1}$ $(-0.2\sigma)$	$100\theta_D$	0.15853	$0.1586^{+0.0022}_{-0.0022}$ $(-0.1\sigma)$
$\tau$	0.0607	$0.061^{+0.041}_{-0.040}$ $(-0.3\sigma)$	$10^9 A_s$	2.135	$2.14^{+0.19}_{-0.17}$ $(-0.3\sigma)$	$z_{\text{eq}}$	3318	$3321^{+150}_{-140}$ $(+0.6\sigma)$
$\ln(10^{10} A_s)$	3.061	$3.060^{+0.085}_{-0.084}$ $(-0.3\sigma)$	$10^9 A_s e^{-2\tau}$	1.891	$1.891^{+0.055}_{-0.054}$ $(-0.2\sigma)$	$100\theta_{\text{eq}}$	0.8329	$0.833^{+0.033}_{-0.033}$ $(-0.5\sigma)$
$n_s$	0.9759	$0.976^{+0.023}_{-0.022}$ $(-0.8\sigma)$	$D_{40}$	1239	$1239^{+53}_{-51}$ $(+0.6\sigma)$	$r_{\text{drag}}/D_V(0.57)$	0.07302	$0.0730^{+0.0030}_{-0.0029}$ $(-0.5\sigma)$
$y_{\text{cal}}$	1.00008	$1.0001^{+0.0049}_{-0.0048}$ $(+0.0\sigma)$	$D_{220}$	5982	$5980^{+360}_{-360}$ $(-0.0\sigma)$	$H(0.57)$	94.65	$94.7^{+2.8}_{-2.5}$ $(-0.2\sigma)$
$c_{EE}$	0.9969	$0.997^{+0.020}_{-0.020}$	$D_{810}$	2573	$2572^{+81}_{-84}$ $(-0.5\sigma)$	$D_A(0.57)$	1348	$1349^{+65}_{-63}$ $(+0.3\sigma)$
$H_0$	70.39	$70.4^{+4.8}_{-4.7}$ $(-0.3\sigma)$	$D_{1420}$	836.8	$836^{+35}_{-36}$ $(-0.5\sigma)$	$F_{\text{AP}}(0.57)$	0.6682	$0.669^{+0.014}_{-0.013}$ $(+0.4\sigma)$
$\Omega_\Lambda$	0.718	$0.717^{+0.050}_{-0.052}$ $(-0.4\sigma)$	$n_{s,0.002}$	0.9759	$0.976^{+0.023}_{-0.022}$ $(-0.8\sigma)$	$f\sigma_8(0.57)$	0.4535	$0.454^{+0.035}_{-0.036}$ $(+0.2\sigma)$
$\Omega_m$	0.282	$0.283^{+0.052}_{-0.050}$ $(+0.4\sigma)$	$Y_P$	0.24570	$0.24569^{+0.00081}_{-0.00085}$ $(-0.8\sigma)$	$\sigma_8(0.57)$	0.5981	$0.598^{+0.027}_{-0.027}$ $(-0.2\sigma)$
$\Omega_m h^2$	0.1395	$0.1396^{+0.0063}_{-0.0059}$ $(+0.6\sigma)$	Age/Gyr	13.627	$13.63^{+0.26}_{-0.27}$ $(+0.1\sigma)$	$Y_P^{\text{BBN}}$	0.24702	$0.24702^{+0.00082}_{-0.00085}$ $(-0.8\sigma)$
$\Omega_m h^3$	0.09817	$0.0982^{+0.0032}_{-0.0029}$ $(+0.1\sigma)$	$z_*$	1087.40	$1087.5^{+3.0}_{-2.9}$ $(+0.1\sigma)$	$\chi^2_{\text{lowTEB}}$	10494.94	$10496.1 (\nu: 2.7)$ $(+0.6\sigma)$
$\sigma_8$	0.7940	$0.794^{+0.044}_{-0.043}$ $(+0.0\sigma)$	$r_*$	144.46	$144.4^{+1.1}_{-1.1}$ $(-0.9\sigma)$	$\chi^2_{\text{CamSpec}}$	2186.4	$2191.3 (\nu: 6.2)$
$\sigma_8 \Omega_m^{0.5}$	0.421	$0.422^{+0.056}_{-0.055}$ $(+0.3\sigma)$	$100\theta_*$	1.03991	$1.0399^{+0.0014}_{-0.0014}$ $(-0.3\sigma)$	$\chi^2_{\text{prior}}$	10.13	$12.1 (\nu: 2.1)$ $(+1.1\sigma)$
$\sigma_8 \Omega_m^{0.25}$	0.578	$0.579^{+0.052}_{-0.050}$ $(+0.2\sigma)$	$z_{\text{drag}}$	1063.52	$1063.5^{+4.2}_{-4.2}$ $(+0.0\sigma)$	$\chi^2_{\text{CMB}}$	12681.4	$12687.4 (\nu: 6.0)$ $(+308.1\sigma)$

Best-fit  $\chi^2_{\text{eff}} = 12691.51$ ;  $\Delta\chi^2_{\text{eff}} = 1442.72$ ;  $\bar{\chi}^2_{\text{eff}} = 12699.49$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 1437.68$ ;  $R - 1 = 0.00431$

$\chi^2_{\text{eff}}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.94 ( $\Delta$  1.32) CamSpec like\_v9.10CMH\_unified: 2186.45

## 2.25 base\_plikHM\_TE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02232	$0.02228^{+0.00051}_{-0.00050}$	$\sigma_8 \Omega_m^{0.5}$	0.4457	$0.446^{+0.029}_{-0.029}$	$D_A/\text{Gpc}$	13.907	$13.911^{+0.091}_{-0.089}$
$\Omega_c h^2$	0.11874	$0.1187^{+0.0041}_{-0.0041}$	$\sigma_8 \Omega_m^{0.25}$	0.5980	$0.598^{+0.031}_{-0.031}$	$z_{\text{drag}}$	1059.74	$1059.6^{+1.1}_{-1.1}$
$100\theta_{\text{MC}}$	1.04096	$1.0409^{+0.0010}_{-0.0010}$	$\sigma_8/h^{0.5}$	0.9747	$0.975^{+0.048}_{-0.046}$	$r_{\text{drag}}$	147.48	$147.53^{+0.99}_{-0.98}$
$\tau$	0.0527	$< 0.0845$	$\langle d^2 \rangle^{1/2}$	2.418	$2.42^{+0.11}_{-0.11}$	$k_D$	0.14041	$0.1403^{+0.0011}_{-0.0011}$
$\ln(10^{10} A_s)$	3.032	$3.031^{+0.080}_{-0.085}$	$z_{\text{re}}$	7.51	$7.4^{+3.7}_{-4.4}$	$100\theta_D$	0.16088	$0.16093^{+0.00064}_{-0.00063}$
$n_s$	0.9652	$0.965^{+0.023}_{-0.023}$	$10^9 A_s$	2.074	$2.07^{+0.17}_{-0.17}$	$z_{\text{eq}}$	3371	$3370^{+93}_{-94}$
$y_{\text{cal}}$	1.00013	$1.0001^{+0.0048}_{-0.0050}$	$10^9 A_s e^{-2\tau}$	1.8666	$1.865^{+0.038}_{-0.037}$	$k_{\text{eq}}$	0.010288	$0.01029^{+0.00028}_{-0.00029}$
$A_{100}^{\text{dustTE}}$	0.133	$0.137^{+0.074}_{-0.073}$	$D_{40}$	1223	$1225^{+53}_{-53}$	$100\theta_{\text{eq}}$	0.8188	$0.819^{+0.018}_{-0.017}$
$A_{100 \times 143}^{\text{dustTE}}$	0.134	$0.133^{+0.057}_{-0.057}$	$D_{220}$	5709	$5704^{+110}_{-110}$	$100\theta_{s,\text{eq}}$	0.4523	$0.4524^{+0.0094}_{-0.0089}$
$A_{100 \times 217}^{\text{dustTE}}$	0.316	$0.30^{+0.16}_{-0.16}$	$D_{810}$	2521	$2519^{+51}_{-50}$	$r_{\text{drag}}/D_V(0.57)$	0.07174	$0.0717^{+0.0014}_{-0.0013}$
$A_{143}^{\text{dustTE}}$	0.155	$0.15^{+0.11}_{-0.10}$	$D_{1420}$	810.7	$809^{+24}_{-24}$	$H(0.57)$	93.07	$93.04^{+0.84}_{-0.77}$
$A_{143 \times 217}^{\text{dustTE}}$	0.351	$0.33^{+0.16}_{-0.16}$	$D_{2000}$	228.6	$228.2^{+9.0}_{-8.7}$	$D_A(0.57)$	1385.5	$1386^{+24}_{-25}$
$A_{217}^{\text{dustTE}}$	1.66	$1.65^{+0.50}_{-0.50}$	$n_{s,0.002}$	0.9652	$0.965^{+0.023}_{-0.023}$	$F_{\text{AP}}(0.57)$	0.6753	$0.6754^{+0.0063}_{-0.0063}$
$c_{100}$	0.99919	$0.9993^{+0.0020}_{-0.0020}$	$Y_P$	0.245370	$0.24535^{+0.00023}_{-0.00023}$	$f\sigma_8(0.57)$	0.4658	$0.466^{+0.023}_{-0.022}$
$H_0$	67.77	$67.7^{+1.9}_{-1.8}$	$Y_P^{\text{BBN}}$	0.246697	$0.24668^{+0.00023}_{-0.00023}$	$\sigma_8(0.57)$	0.5976	$0.597^{+0.026}_{-0.027}$
$\Omega_\Lambda$	0.6915	$0.691^{+0.024}_{-0.025}$	$10^5 D/H$	2.601	$2.609^{+0.097}_{-0.094}$	$\chi_{\text{lowEB}}^2$	5430.77	$5431.7 (\nu: 0.7)$
$\Omega_m$	0.3085	$0.309^{+0.025}_{-0.024}$	Age/Gyr	13.796	$13.801^{+0.075}_{-0.078}$	$\chi_{\text{plikTE}}^2$	931.2	$938.4 (\nu: 8.2)$
$\Omega_m h^2$	0.14170	$0.1417^{+0.0039}_{-0.0039}$	$z_*$	1089.87	$1089.93^{+0.85}_{-0.85}$	$\chi_{\text{prior}}^2$	1.9	$7.8 (\nu: 6.5)$
$\Omega_m h^3$	0.09603	$0.0959^{+0.0010}_{-0.0011}$	$r_*$	144.80	$144.83^{+0.97}_{-0.94}$	$\chi_{\text{CMB}}^2$	6362.0	$6370.1 (\nu: 8.9)$
$\sigma_8$	0.8024	$0.802^{+0.036}_{-0.037}$	$100\theta_*$	1.04115	$1.04113^{+0.00098}_{-0.0010}$			

Best-fit  $\chi_{\text{eff}}^2 = 6363.89$ ;  $\bar{\chi}_{\text{eff}}^2 = 6377.85$ ;  $R - 1 = 0.00716$

$\chi_{\text{eff}}^2$ : CMB - lowl\_QU\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 5430.77 plik\_dx11dr2\_HM\_v18\_TE: 931.24

## 2.26 base\_plikHM\_EE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02388	$0.0240^{+0.0026}_{-0.0025}$	$\sigma_8 \Omega_m^{0.25}$	0.579	$0.582^{+0.063}_{-0.060}$	$z_{\text{drag}}$	1063.0	$1063.1^{+5.0}_{-5.1}$
$\Omega_c h^2$	0.1148	$0.115^{+0.010}_{-0.010}$	$\sigma_8/h^{0.5}$	0.948	$0.951^{+0.089}_{-0.087}$	$r_{\text{drag}}$	146.82	$146.7^{+1.6}_{-1.5}$
$100\theta_{\text{MC}}$	1.03993	$1.0399^{+0.0018}_{-0.0019}$	$\langle d^2 \rangle^{1/2}$	2.387	$2.40^{+0.18}_{-0.18}$	$k_{\text{D}}$	0.14220	$0.1423^{+0.0027}_{-0.0028}$
$\tau$	0.0566	$0.059^{+0.038}_{-0.040}$	$z_{\text{re}}$	7.50	$7.6^{+3.7}_{-4.1}$	$100\theta_{\text{D}}$	0.15885	$0.1588^{+0.0028}_{-0.0026}$
$\ln(10^{10} A_s)$	3.059	$3.066^{+0.082}_{-0.085}$	$10^9 A_s$	2.131	$2.15^{+0.18}_{-0.18}$	$z_{\text{eq}}$	3313	$3321^{+200}_{-190}$
$n_s$	0.9732	$0.973^{+0.033}_{-0.032}$	$10^9 A_s e^{-2\tau}$	1.903	$1.907^{+0.053}_{-0.053}$	$k_{\text{eq}}$	0.01011	$0.01014^{+0.00060}_{-0.00058}$
$y_{\text{cal}}$	0.99986	$1.0002^{+0.0050}_{-0.0049}$	$D_{40}$	1251	$1257^{+72}_{-72}$	$100\theta_{\text{eq}}$	0.8330	$0.832^{+0.040}_{-0.042}$
$A_{100}^{\text{dustEE}}$	0.0802	$0.080^{+0.012}_{-0.012}$	$D_{220}$	6011	$6031^{+410}_{-420}$	$100\theta_{\text{s,eq}}$	0.4585	$0.458^{+0.019}_{-0.020}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0475	$0.047^{+0.011}_{-0.011}$	$D_{810}$	2587	$2590^{+80}_{-84}$	$r_{\text{drag}}/D_V(0.57)$	0.07296	$0.0730^{+0.0037}_{-0.0036}$
$A_{100 \times 217}^{\text{dustEE}}$	0.095	$0.099^{+0.065}_{-0.063}$	$D_{1420}$	839.2	$840^{+39}_{-41}$	$H(0.57)$	94.45	$94.6^{+3.3}_{-3.3}$
$A_{143}^{\text{dustEE}}$	0.0988	$0.099^{+0.014}_{-0.014}$	$D_{2000}$	239.2	$239^{+15}_{-16}$	$D_A(0.57)$	1352	$1352^{+81}_{-76}$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.224^{+0.091}_{-0.092}$	$n_{\text{s},0.002}$	0.9732	$0.973^{+0.033}_{-0.032}$	$F_{\text{AP}}(0.57)$	0.6687	$0.669^{+0.017}_{-0.016}$
$A_{217}^{\text{dustEE}}$	0.636	$0.65^{+0.25}_{-0.25}$	$Y_{\text{P}}$	0.24603	$0.24605^{+0.00099}_{-0.0011}$	$f\sigma_8(0.57)$	0.4539	$0.455^{+0.041}_{-0.042}$
$H_0$	70.2	$70.2^{+5.7}_{-5.8}$	$Y_{\text{P}}^{\text{BBN}}$	0.24736	$0.2474^{+0.0010}_{-0.0011}$	$\sigma_8(0.57)$	0.5975	$0.599^{+0.026}_{-0.028}$
$\Omega_\Lambda$	0.717	$0.714^{+0.062}_{-0.067}$	$10^5 \text{D}/\text{H}$	2.333	$2.33^{+0.42}_{-0.40}$	$\chi_{\text{lowEB}}^2$	5430.73	$5431.8 (\nu: 0.9)$
$\Omega_{\text{m}}$	0.283	$0.286^{+0.067}_{-0.062}$	Age/Gyr	13.652	$13.64^{+0.31}_{-0.32}$	$\chi_{\text{plikEE}}^2$	750.8	$758.5 (\nu: 9.6)$
$\Omega_{\text{m}} h^2$	0.1393	$0.1396^{+0.0082}_{-0.0079}$	$z_*$	1087.70	$1087.7^{+3.7}_{-3.5}$	$\chi_{\text{prior}}^2$	3.4	$7.7 (\nu: 5.9)$
$\Omega_{\text{m}} h^3$	0.09772	$0.0979^{+0.0038}_{-0.0036}$	$r_*$	144.63	$144.5^{+1.4}_{-1.4}$	$\chi_{\text{CMB}}^2$	6181.5	$6190.3 (\nu: 10.3)$
$\sigma_8$	0.7938	$0.796^{+0.046}_{-0.048}$	$100\theta_*$	1.03996	$1.0399^{+0.0018}_{-0.0018}$			
$\sigma_8 \Omega_{\text{m}}^{0.5}$	0.422	$0.425^{+0.069}_{-0.067}$	$D_{\text{A}}/\text{Gpc}$	13.907	$13.90^{+0.13}_{-0.13}$			

Best-fit  $\chi_{\text{eff}}^2 = 6184.90$ ;  $\bar{\chi}_{\text{eff}}^2 = 6197.97$ ;  $R - 1 = 0.00671$

$\chi_{\text{eff}}^2$ : CMB - lowl\_QU\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 5430.73 plik\_dx11dr2\_HM\_v18\_EE: 750.75

## 2.27 base\_CamSpecHM\_TE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022329	$0.02233^{+0.00050}_{-0.00050}$ (+0.2 $\sigma$ )	$\sigma_8/h^{0.5}$	0.9651	$0.963^{+0.050}_{-0.049}$ (-0.5 $\sigma$ )	$r_{\text{drag}}$	147.99	$148.0^{+1.0}_{-1.0}$ (+0.9 $\sigma$ )
$\Omega_c h^2$	0.11682	$0.1169^{+0.0041}_{-0.0041}$ (-0.9 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.378	$2.37^{+0.11}_{-0.11}$ (-0.8 $\sigma$ )	$k_D$	0.13991	$0.1399^{+0.0012}_{-0.0012}$ (-0.7 $\sigma$ )
$100\theta_{\text{MC}}$	1.04130	$1.04126^{+0.00099}_{-0.00097}$ (+0.6 $\sigma$ )	$z_{\text{re}}$	7.80	$7.5^{+3.7}_{-4.6}$ (+0.1 $\sigma$ )	$100\theta_D$	0.16096	$0.16096^{+0.00063}_{-0.00060}$ (+0.1 $\sigma$ )
$\tau$	0.0559	$0.055^{+0.035}_{-0.044}$ (+0.1 $\sigma$ )	$10^9 A_s$	2.074	$2.06^{+0.18}_{-0.18}$ (-0.1 $\sigma$ )	$z_{\text{eq}}$	3325	$3327^{+94}_{-93}$ (-0.9 $\sigma$ )
$\ln(10^{10} A_s)$	3.032	$3.026^{+0.086}_{-0.086}$ (-0.1 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.855	$1.849^{+0.054}_{-0.052}$ (-0.8 $\sigma$ )	$100\theta_{\text{eq}}$	0.8275	$0.827^{+0.019}_{-0.018}$ (+0.9 $\sigma$ )
$n_s$	0.9753	$0.975^{+0.022}_{-0.022}$ (+0.9 $\sigma$ )	$D_{40}$	1196	$1194^{+55}_{-54}$ (-1.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07242	$0.0724^{+0.0015}_{-0.0014}$ (+1.0 $\sigma$ )
$y_{\text{cal}}$	0.99997	$1.0000^{+0.0048}_{-0.0049}$ (-0.0 $\sigma$ )	$D_{220}$	5666	$5649^{+160}_{-160}$ (-0.9 $\sigma$ )	$H(0.57)$	93.36	$93.36^{+0.86}_{-0.81}$ (+0.8 $\sigma$ )
$c_{TE}$	1.0015	$1.000^{+0.020}_{-0.020}$	$D_{810}$	2519	$2512^{+72}_{-71}$ (-0.3 $\sigma$ )	$D_A(0.57)$	1375.2	$1376^{+24}_{-24}$ (-0.9 $\sigma$ )
$H_0$	68.58	$68.6^{+1.9}_{-1.8}$ (+0.9 $\sigma$ )	$D_{1420}$	813.6	$811^{+29}_{-28}$ (+0.1 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6724	$0.6725^{+0.0063}_{-0.0062}$ (-0.9 $\sigma$ )
$\Omega_\Lambda$	0.7027	$0.702^{+0.023}_{-0.025}$ (+0.9 $\sigma$ )	$n_{s,0.002}$	0.9753	$0.975^{+0.022}_{-0.022}$ (+0.9 $\sigma$ )	$f\sigma_8(0.57)$	0.4610	$0.460^{+0.024}_{-0.024}$ (-0.5 $\sigma$ )
$\Omega_m$	0.2973	$0.298^{+0.025}_{-0.023}$ (-0.9 $\sigma$ )	$Y_P$	0.244954	$0.24496^{+0.00021}_{-0.00021}$ (-3.4 $\sigma$ )	$\sigma_8(0.57)$	0.5980	$0.596^{+0.027}_{-0.027}$ (-0.1 $\sigma$ )
$\Omega_m h^2$	0.13980	$0.1398^{+0.0039}_{-0.0039}$ (-0.9 $\sigma$ )	Age/Gyr	13.776	$13.778^{+0.074}_{-0.077}$ (-0.6 $\sigma$ )	$Y_P^{\text{BBN}}$	0.246285	$0.24628^{+0.00021}_{-0.00022}$ (-3.4 $\sigma$ )
$\Omega_m h^3$	0.09587	$0.0959^{+0.0010}_{-0.0010}$ (-0.2 $\sigma$ )	$z_*$	1089.67	$1089.68^{+0.86}_{-0.82}$ (-0.6 $\sigma$ )	$\chi^2_{\text{lowEB}}$	5430.77	$5431.7 (\nu: 0.7)$ (+0.0 $\sigma$ )
$\sigma_8$	0.7992	$0.797^{+0.038}_{-0.037}$ (-0.3 $\sigma$ )	$r_*$	145.29	$145.28^{+0.98}_{-0.99}$ (+0.9 $\sigma$ )	$\chi^2_{\text{CamSpec}}$	2694.5	$2699.5 (\nu: 5.2)$
$\sigma_8 \Omega_m^{0.5}$	0.4357	$0.435^{+0.030}_{-0.030}$ (-0.7 $\sigma$ )	$100\theta_*$	1.04150	$1.04146^{+0.00097}_{-0.00096}$ (+0.6 $\sigma$ )	$\chi^2_{\text{prior}}$	9.96	$12.0 (\nu: 2.0)$ (+1.2 $\sigma$ )
$\sigma_8 \Omega_m^{0.25}$	0.5901	$0.589^{+0.033}_{-0.033}$ (-0.6 $\sigma$ )	$z_{\text{drag}}$	1059.59	$1059.6^{+1.1}_{-1.0}$ (-0.1 $\sigma$ )	$\chi^2_{\text{CMB}}$	8125.2	$8131.3 (\nu: 5.9)$ (+416.9 $\sigma$ )

Best-fit  $\chi^2_{\text{eff}} = 8135.21$ ;  $\Delta\chi^2_{\text{eff}} = 1771.32$ ;  $\bar{\chi}^2_{\text{eff}} = 8143.29$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 1765.44$ ;  $R - 1 = 0.00482$

$\chi^2_{\text{eff}}$ : CMB - lowl\_QU\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 5430.77 ( $\Delta$  -0.00) CamSpec like\_v9.10CMH\_unified: 2694.48

## 2.28 base\_CamSpecHM\_EE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02404	$0.0240^{+0.0021}_{-0.0020}$ (+0.0 $\sigma$ )	$\sigma_8/h^{0.5}$	0.958	$0.956^{+0.072}_{-0.074}$ (+0.1 $\sigma$ )	$r_{\text{drag}}$	146.20	$146.2^{+1.2}_{-1.2}$ (−0.6 $\sigma$ )
$\Omega_c h^2$	0.1164	$0.1166^{+0.0081}_{-0.0080}$ (+0.3 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.427	$2.42^{+0.15}_{-0.15}$ (+0.2 $\sigma$ )	$k_D$	0.14299	$0.1429^{+0.0021}_{-0.0021}$ (+0.4 $\sigma$ )
$100\theta_{\text{MC}}$	1.03969	$1.0397^{+0.0014}_{-0.0014}$ (−0.2 $\sigma$ )	$z_{\text{re}}$	7.61	$7.3^{+3.5}_{-4.0}$ (−0.2 $\sigma$ )	$100\theta_D$	0.15855	$0.1586^{+0.0021}_{-0.0021}$ (−0.1 $\sigma$ )
$\tau$	0.0578	$0.056^{+0.037}_{-0.038}$ (−0.2 $\sigma$ )	$10^9 A_s$	2.142	$2.13^{+0.17}_{-0.17}$ (−0.2 $\sigma$ )	$z_{\text{eq}}$	3357	$3361^{+160}_{-150}$ (+0.4 $\sigma$ )
$\ln(10^{10} A_s)$	3.064	$3.059^{+0.079}_{-0.079}$ (−0.2 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.908	$1.906^{+0.055}_{-0.056}$ (−0.0 $\sigma$ )	$100\theta_{\text{eq}}$	0.8252	$0.825^{+0.034}_{-0.032}$ (−0.4 $\sigma$ )
$n_s$	0.9648	$0.965^{+0.025}_{-0.023}$ (−0.5 $\sigma$ )	$D_{40}$	1273	$1271^{+60}_{-60}$ (+0.4 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07239	$0.0724^{+0.0031}_{-0.0028}$ (−0.3 $\sigma$ )
$y_{\text{cal}}$	1.0000	$1.0001^{+0.0049}_{-0.0051}$ (−0.0 $\sigma$ )	$D_{220}$	6047	$6035^{+360}_{-350}$ (+0.0 $\sigma$ )	$H(0.57)$	94.32	$94.3^{+2.7}_{-2.5}$ (−0.1 $\sigma$ )
$c_{EE}$	1.0014	$1.000^{+0.019}_{-0.019}$	$D_{810}$	2583	$2578^{+80}_{-80}$ (−0.3 $\sigma$ )	$D_A(0.57)$	1358	$1359^{+62}_{-65}$ (+0.2 $\sigma$ )
$H_0$	69.59	$69.6^{+4.9}_{-4.5}$ (−0.2 $\sigma$ )	$D_{1420}$	835.7	$834^{+34}_{-34}$ (−0.3 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6709	$0.671^{+0.014}_{-0.013}$ (+0.3 $\sigma$ )
$\Omega_\Lambda$	0.709	$0.707^{+0.049}_{-0.054}$ (−0.2 $\sigma$ )	$n_{s,0.002}$	0.9648	$0.965^{+0.025}_{-0.023}$ (−0.5 $\sigma$ )	$f\sigma_8(0.57)$	0.4591	$0.458^{+0.033}_{-0.035}$ (+0.1 $\sigma$ )
$\Omega_m$	0.291	$0.293^{+0.054}_{-0.049}$ (+0.2 $\sigma$ )	$Y_P$	0.24566	$0.24564^{+0.00081}_{-0.00080}$ (−0.8 $\sigma$ )	$\sigma_8(0.57)$	0.5992	$0.597^{+0.025}_{-0.025}$ (−0.1 $\sigma$ )
$\Omega_m h^2$	0.1411	$0.1413^{+0.0065}_{-0.0062}$ (+0.4 $\sigma$ )	Age/Gyr	13.651	$13.65^{+0.24}_{-0.26}$ (+0.0 $\sigma$ )	$Y_P^{\text{BBN}}$	0.24698	$0.24697^{+0.00081}_{-0.00080}$ (−0.8 $\sigma$ )
$\Omega_m h^3$	0.09821	$0.0982^{+0.0031}_{-0.0028}$ (+0.2 $\sigma$ )	$z_*$	1087.65	$1087.7^{+2.9}_{-2.8}$ (+0.0 $\sigma$ )	$\chi^2_{\text{lowEB}}$	5430.75	$5431.7$ ( $\nu$ : 0.7) (−0.1 $\sigma$ )
$\sigma_8$	0.7988	$0.797^{+0.040}_{-0.042}$ (+0.0 $\sigma$ )	$r_*$	144.08	$144.1^{+1.1}_{-1.1}$ (−0.6 $\sigma$ )	$\chi^2_{\text{CamSpec}}$	2185.2	$2190.2$ ( $\nu$ : 5.0)
$\sigma_8 \Omega_m^{0.5}$	0.431	$0.431^{+0.055}_{-0.054}$ (+0.2 $\sigma$ )	$100\theta_*$	1.03971	$1.0397^{+0.0014}_{-0.0014}$ (−0.2 $\sigma$ )	$\chi^2_{\text{prior}}$	10.05	$12.0$ ( $\nu$ : 2.1) (+1.3 $\sigma$ )
$\sigma_8 \Omega_m^{0.25}$	0.587	$0.586^{+0.050}_{-0.051}$ (+0.1 $\sigma$ )	$z_{\text{drag}}$	1063.44	$1063.4^{+4.1}_{-3.9}$ (+0.1 $\sigma$ )	$\chi^2_{\text{CMB}}$	7616.0	$7621.9$ ( $\nu$ : 5.6) (+314.8 $\sigma$ )

Best-fit  $\chi^2_{\text{eff}} = 7626.04$ ;  $\Delta\chi^2_{\text{eff}} = 1441.14$ ;  $\bar{\chi}^2_{\text{eff}} = 7633.94$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 1435.97$ ;  $R - 1 = 0.00531$

$\chi^2_{\text{eff}}$ : CMB - lowl\_QU\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 5430.75 ( $\Delta$  0.02) CamSpec like\_v9.10CMH\_unified: 2185.24

## 2.29 base\_plikHM\_TT\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022143	$0.02213^{+0.00046}_{-0.00044}$	$\Omega_m$	0.3241	$0.324^{+0.029}_{-0.027}$	$100\theta_*$	1.04090	$1.04090^{+0.00093}_{-0.00094}$
$\Omega_c h^2$	0.12124	$0.1212^{+0.0045}_{-0.0043}$	$\Omega_m h^2$	0.14402	$0.1440^{+0.0042}_{-0.0041}$	$D_A/\text{Gpc}$	13.862	$13.863^{+0.088}_{-0.089}$
$100\theta_{\text{MC}}$	1.04069	$1.04069^{+0.00095}_{-0.00096}$	$\Omega_m h^3$	0.09601	$0.09598^{+0.00089}_{-0.00087}$	$z_{\text{drag}}$	1059.51	$1059.46^{+0.93}_{-0.89}$
$\tau$	0.0693	$0.069^{+0.037}_{-0.036}$	$\sigma_8$	0.8280	$0.828^{+0.027}_{-0.028}$	$r_{\text{drag}}$	147.02	$147.04^{+0.94}_{-0.96}$
$\ln(10^{10} A_s)$	3.077	$3.076^{+0.069}_{-0.069}$	$\sigma_8 \Omega_m^{0.5}$	0.4714	$0.471^{+0.027}_{-0.026}$	$k_D$	0.14077	$0.1407^{+0.0010}_{-0.0010}$
$n_s$	0.9608	$0.960^{+0.012}_{-0.013}$	$\sigma_8 \Omega_m^{0.25}$	0.6247	$0.624^{+0.025}_{-0.026}$	$100\theta_D$	0.16100	$0.16103^{+0.00053}_{-0.00052}$
$y_{\text{cal}}$	1.00030	$1.0003^{+0.0049}_{-0.0049}$	$\sigma_8/h^{0.5}$	1.0141	$1.014^{+0.037}_{-0.038}$	$z_{\text{eq}}$	3426	$3426^{+100}_{-97}$
$A_{217}^{\text{CIB}}$	67.7	$65^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.508	$2.509^{+0.089}_{-0.091}$	$k_{\text{eq}}$	0.010458	$0.01046^{+0.00031}_{-0.00030}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$z_{\text{re}}$	9.24	$9.1^{+3.5}_{-3.6}$	$100\theta_{\text{eq}}$	0.8082	$0.808^{+0.018}_{-0.018}$
$A_{143}^{\text{tSZ}}$	7.15	$4.9^{+3.8}_{-3.8}$	$10^9 A_s$	2.169	$2.17^{+0.15}_{-0.15}$	$100\theta_{s,\text{eq}}$	0.4469	$0.4470^{+0.0094}_{-0.0095}$
$A_{100}^{\text{PS}}$	256	$263^{+50}_{-50}$	$10^9 A_s e^{-2\tau}$	1.8880	$1.888^{+0.029}_{-0.028}$	$r_{\text{drag}}/D_V(0.57)$	0.07090	$0.0709^{+0.0015}_{-0.0015}$
$A_{143}^{\text{PS}}$	40.6	$45^{+20}_{-20}$	$D_{40}$	1245.0	$1247^{+31}_{-30}$	$H(0.57)$	92.63	$92.63^{+0.84}_{-0.79}$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$D_{220}$	5722	$5723^{+82}_{-81}$	$D_A(0.57)$	1400.2	$1400^{+27}_{-26}$
$A_{217}^{\text{PS}}$	97.7	$97^{+20}_{-20}$	$D_{810}$	2536.2	$2535^{+28}_{-27}$	$F_{\text{AP}}(0.57)$	0.6792	$0.6792^{+0.0072}_{-0.0067}$
$A^{\text{kSZ}}$	0.0	—	$D_{1420}$	813.7	$813^{+10}_{-10}$	$f\sigma_8(0.57)$	0.4845	$0.484^{+0.018}_{-0.018}$
$A_{100}^{\text{dustTT}}$	7.37	$7.4^{+3.7}_{-3.7}$	$D_{2000}$	229.79	$229.6^{+3.7}_{-3.6}$	$\sigma_8(0.57)$	0.6129	$0.613^{+0.021}_{-0.021}$
$A_{143}^{\text{dustTT}}$	9.05	$9.0^{+3.6}_{-3.6}$	$n_{s,0.002}$	0.9608	$0.960^{+0.012}_{-0.013}$	$f_{2000}^{143}$	30.6	$31^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.1^{+8.2}_{-8.2}$	$Y_{\text{P}}$	0.245289	$0.24528^{+0.00021}_{-0.00020}$	$f_{2000}^{143 \times 217}$	33.06	$33^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	0.246616	$0.24661^{+0.00021}_{-0.00020}$	$f_{2000}^{217}$	106.60	$106.7^{+4.0}_{-4.0}$
$c_{100}$	0.99794	$0.9979^{+0.0015}_{-0.0015}$	$10^5 \text{D}/\text{H}$	2.634	$2.637^{+0.087}_{-0.087}$	$\chi_{\text{lowEB}}^2$	5431.55	$5432.4 (\nu: 2.1)$
$c_{217}$	0.99601	$0.9960^{+0.0028}_{-0.0028}$	$\text{Age}/\text{Gyr}$	13.832	$13.833^{+0.075}_{-0.077}$	$\chi_{\text{plik}}^2$	763.7	$777.5 (\nu: 15.4)$
$H_0$	66.66	$66.7^{+1.9}_{-1.9}$	$z_*$	1090.32	$1090.34^{+0.88}_{-0.85}$	$\chi_{\text{prior}}^2$	2.0	$7.3 (\nu: 6.3)$
$\Omega_\Lambda$	0.6759	$0.676^{+0.027}_{-0.029}$	$r_*$	144.29	$144.30^{+0.95}_{-0.97}$	$\chi_{\text{CMB}}^2$	6195.2	$6209.9 (\nu: 15.1)$

Best-fit  $\chi_{\text{eff}}^2 = 6197.23$ ;  $\bar{\chi}_{\text{eff}}^2 = 6217.15$ ;  $R - 1 = 0.00628$

$\chi_{\text{eff}}^2$ : CMB - lowl\_QU\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 5431.55 plik\_dx11dr2\_HM\_v18\_TT: 763.67

### 2.30 base\_plikHM\_TTTEEE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022214	$0.02221^{+0.00031}_{-0.00031}$	$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.17}_{-0.16}$	$10^5 \text{D/H}$	2.621	$2.622^{+0.060}_{-0.059}$
$\Omega_c h^2$	0.12059	$0.1205^{+0.0029}_{-0.0029}$	$A_{143}^{\text{dustTE}}$	0.156	$0.16^{+0.11}_{-0.10}$	Age/Gyr	13.822	$13.823^{+0.051}_{-0.051}$
$100\theta_{\text{MC}}$	1.04070	$1.04069^{+0.00062}_{-0.00061}$	$A_{143 \times 217}^{\text{dustTE}}$	0.338	$0.34^{+0.16}_{-0.16}$	$z_*$	1090.17	$1090.17^{+0.59}_{-0.59}$
$\tau$	0.0728	$0.073^{+0.032}_{-0.032}$	$A_{217}^{\text{dustTE}}$	1.678	$1.67^{+0.50}_{-0.49}$	$r_*$	144.40	$144.43^{+0.64}_{-0.64}$
$\ln(10^{10} A_s)$	3.083	$3.084^{+0.063}_{-0.062}$	$c_{100}$	0.99823	$0.9982^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04090	$1.04089^{+0.00062}_{-0.00060}$
$n_s$	0.9616	$0.9614^{+0.0096}_{-0.0097}$	$c_{217}$	0.99606	$0.9961^{+0.0029}_{-0.0029}$	$D_A/\text{Gpc}$	13.872	$13.876^{+0.059}_{-0.060}$
$y_{\text{cal}}$	1.00025	$1.0005^{+0.0049}_{-0.0049}$	$H_0$	66.95	$67.0^{+1.3}_{-1.3}$	$z_{\text{drag}}$	1059.63	$1059.59^{+0.62}_{-0.61}$
$A_{217}^{\text{CIB}}$	67.3	$65^{+10}_{-10}$	$\Omega_\Lambda$	0.6799	$0.680^{+0.018}_{-0.019}$	$r_{\text{drag}}$	147.11	$147.14^{+0.62}_{-0.63}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.05	—	$\Omega_m$	0.3201	$0.320^{+0.019}_{-0.018}$	$k_D$	0.14073	$0.14068^{+0.00066}_{-0.00064}$
$A_{143}^{\text{tSZ}}$	7.13	$5.2^{+3.6}_{-3.8}$	$\Omega_m h^2$	0.14345	$0.1433^{+0.0028}_{-0.0027}$	$100\theta_D$	0.160924	$0.16094^{+0.00038}_{-0.00036}$
$A_{100}^{\text{PS}}$	259	$264^{+50}_{-50}$	$\Omega_m h^3$	0.09603	$0.09600^{+0.00058}_{-0.00058}$	$z_{\text{eq}}$	3413	$3410^{+66}_{-66}$
$A_{143}^{\text{PS}}$	40.4	$44^{+10}_{-20}$	$\sigma_8$	0.8283	$0.828^{+0.025}_{-0.025}$	$k_{\text{eq}}$	0.010416	$0.01041^{+0.00020}_{-0.00020}$
$A_{143 \times 217}^{\text{PS}}$	34.6	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4686	$0.468^{+0.020}_{-0.020}$	$100\theta_{\text{eq}}$	0.8108	$0.811^{+0.013}_{-0.012}$
$A_{217}^{\text{PS}}$	97.9	$97^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6230	$0.623^{+0.020}_{-0.021}$	$100\theta_{s,\text{eq}}$	0.4482	$0.4485^{+0.0064}_{-0.0062}$
$A^{\text{kSZ}}$	0.00	$< 8.26$	$\sigma_8/h^{0.5}$	1.0123	$1.012^{+0.032}_{-0.032}$	$r_{\text{drag}}/D_V(0.57)$	0.07110	$0.07113^{+0.00099}_{-0.00096}$
$A_{100}^{\text{dustTT}}$	7.39	$7.3^{+3.7}_{-3.6}$	$\langle d^2 \rangle^{1/2}$	2.507	$2.508^{+0.078}_{-0.077}$	$H(0.57)$	92.74	$92.75^{+0.56}_{-0.53}$
$A_{143}^{\text{dustTT}}$	8.94	$8.9^{+3.6}_{-3.5}$	$z_{\text{re}}$	9.53	$9.5^{+2.8}_{-3.2}$	$D_A(0.57)$	1396.4	$1396^{+17}_{-18}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.1^{+8.2}_{-8.1}$	$10^9 A_s$	2.182	$2.18^{+0.14}_{-0.13}$	$F_{\text{AP}}(0.57)$	0.67819	$0.6781^{+0.0046}_{-0.0046}$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8862	$1.886^{+0.023}_{-0.024}$	$f\sigma_8(0.57)$	0.4837	$0.484^{+0.015}_{-0.015}$
$A_{100}^{\text{dustEE}}$	0.0807	$0.081^{+0.011}_{-0.011}$	$D_{40}$	1245.7	$1248^{+27}_{-26}$	$\sigma_8(0.57)$	0.6141	$0.614^{+0.019}_{-0.019}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0483	$0.0484^{+0.0098}_{-0.0098}$	$D_{220}$	5734	$5738^{+76}_{-77}$	$f_{2000}^{143}$	30.0	$30^{+5}_{-5}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.0996^{+0.065}_{-0.065}$	$D_{810}$	2536.6	$2537^{+27}_{-27}$	$f_{2000}^{143 \times 217}$	32.71	$33^{+4}_{-4}$
$A_{143}^{\text{dustEE}}$	0.0995	$0.0996^{+0.014}_{-0.013}$	$D_{1420}$	814.1	$814.0^{+9.5}_{-9.5}$	$f_{2000}^{217}$	106.26	$106.4^{+3.6}_{-3.7}$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.224^{+0.091}_{-0.093}$	$D_{2000}$	230.01	$229.9^{+3.2}_{-3.2}$	$\chi_{\text{lowEB}}^2$	5431.90	$5432.6 (\nu: 2.1)$
$A_{217}^{\text{dustEE}}$	0.649	$0.65^{+0.26}_{-0.25}$	$n_{s,0.002}$	0.9616	$0.9614^{+0.0096}_{-0.0097}$	$\chi_{\text{plik}}^2$	2432.3	$2451.1 (\nu: 23.1)$
$A_{100}^{\text{dustTE}}$	0.142	$0.141^{+0.075}_{-0.074}$	$Y_P$	0.245324	$0.24532^{+0.00014}_{-0.00014}$	$\chi_{\text{prior}}^2$	6.6	$19.2 (\nu: 15.2)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.132^{+0.058}_{-0.057}$	$Y_P^{\text{BBN}}$	0.246650	$0.24664^{+0.00014}_{-0.00014}$	$\chi_{\text{CMB}}^2$	7864.2	$7883.7 (\nu: 22.2)$

Best-fit  $\chi_{\text{eff}}^2 = 7870.83$ ;  $\bar{\chi}_{\text{eff}}^2 = 7902.90$ ;  $R - 1 = 0.00941$

$\chi_{\text{eff}}^2$ : CMB - lowl\_QU\_70\_dx11d.2014.10.03\_v5c\_Ap: 5431.90 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2432.28

### 2.31 base\_plikHM\_TT\_tau07

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022215	$0.02220^{+0.00045}_{-0.00046}$	$\Omega_m$	0.3202	$0.321^{+0.028}_{-0.026}$	$100\theta_*$	1.04098	$1.04098^{+0.00091}_{-0.00092}$
$\Omega_c h^2$	0.12066	$0.1208^{+0.0044}_{-0.0043}$	$\Omega_m h^2$	0.14352	$0.1436^{+0.0042}_{-0.0041}$	$D_A/\text{Gpc}$	13.870	$13.869^{+0.089}_{-0.092}$
$100\theta_{\text{MC}}$	1.04079	$1.04078^{+0.00093}_{-0.00093}$	$\Omega_m h^3$	0.09609	$0.09606^{+0.00088}_{-0.00090}$	$z_{\text{drag}}$	1059.63	$1059.59^{+0.88}_{-0.91}$
$\tau$	0.0851	$0.083^{+0.035}_{-0.036}$	$\sigma_8$	0.8389	$0.838^{+0.028}_{-0.028}$	$r_{\text{drag}}$	147.09	$147.09^{+0.96}_{-0.98}$
$\ln(10^{10} A_s)$	3.107	$3.104^{+0.067}_{-0.068}$	$\sigma_8 \Omega_m^{0.5}$	0.4747	$0.475^{+0.029}_{-0.027}$	$k_D$	0.14075	$0.1407^{+0.0010}_{-0.0010}$
$n_s$	0.9626	$0.962^{+0.012}_{-0.012}$	$\sigma_8 \Omega_m^{0.25}$	0.6310	$0.630^{+0.027}_{-0.026}$	$100\theta_D$	0.16093	$0.16096^{+0.00056}_{-0.00051}$
$A_{217}^{\text{CIB}}$	67.0	$64^{+10}_{-10}$	$\sigma_8/h^{0.5}$	1.0252	$1.024^{+0.039}_{-0.038}$	$z_{\text{eq}}$	3414	$3416^{+100}_{-97}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\langle d^2 \rangle^{1/2}$	2.536	$2.534^{+0.094}_{-0.093}$	$k_{\text{eq}}$	0.010421	$0.01043^{+0.00031}_{-0.00030}$
$A_{143}^{\text{tSZ}}$	7.16	$5.0^{+3.8}_{-3.8}$	$z_{\text{re}}$	10.65	$10.4^{+3.1}_{-3.3}$	$100\theta_{\text{eq}}$	0.8106	$0.810^{+0.018}_{-0.018}$
$A_{100}^{\text{PS}}$	255	$260^{+50}_{-50}$	$10^9 A_s$	2.235	$2.23^{+0.15}_{-0.15}$	$100\theta_{s,\text{eq}}$	0.4481	$0.4480^{+0.0095}_{-0.0094}$
$A_{143}^{\text{PS}}$	39.1	$44^{+20}_{-20}$	$10^9 A_s e^{-2\tau}$	1.8850	$1.885^{+0.028}_{-0.028}$	$r_{\text{drag}}/D_V(0.57)$	0.07110	$0.0711^{+0.0015}_{-0.0014}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{40}$	1247.6	$1249^{+31}_{-31}$	$H(0.57)$	92.75	$92.74^{+0.81}_{-0.77}$
$A_{217}^{\text{PS}}$	97.7	$97^{+20}_{-20}$	$D_{220}$	5724	$5725^{+80}_{-80}$	$D_A(0.57)$	1396.2	$1397^{+26}_{-25}$
$A^{\text{kSZ}}$	0.0	—	$D_{810}$	2534.4	$2534^{+27}_{-27}$	$F_{\text{AP}}(0.57)$	0.6782	$0.6784^{+0.0070}_{-0.0066}$
$A_{100}^{\text{dustTT}}$	7.25	$7.4^{+3.7}_{-3.7}$	$D_{1420}$	813.6	$813^{+10}_{-10}$	$f\sigma_8(0.57)$	0.4899	$0.489^{+0.019}_{-0.019}$
$A_{143}^{\text{dustTT}}$	8.91	$9.0^{+3.6}_{-3.6}$	$D_{2000}$	230.20	$230.0^{+3.6}_{-3.6}$	$\sigma_8(0.57)$	0.6219	$0.621^{+0.021}_{-0.021}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.1^{+8.2}_{-8.0}$	$n_{s,0.002}$	0.9626	$0.962^{+0.012}_{-0.012}$	$f_{2000}^{143}$	29.8	$30^{+6}_{-6}$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$Y_{\text{P}}$	0.245324	$0.24531^{+0.00020}_{-0.00021}$	$f_{2000}^{143 \times 217}$	32.38	$33^{+4}_{-4}$
$c_{100}$	0.99794	$0.9979^{+0.0015}_{-0.0015}$	$Y_{\text{P}}^{\text{BBN}}$	0.246650	$0.24664^{+0.00020}_{-0.00021}$	$f_{2000}^{217}$	106.06	$106.3^{+3.9}_{-3.9}$
$c_{217}$	0.99596	$0.9959^{+0.0028}_{-0.0028}$	$10^5 \text{D}/\text{H}$	2.621	$2.625^{+0.089}_{-0.084}$	$\chi_{\text{plik}}^2$	762.4	$776.4 (\nu: 14.9)$
$y_{\text{cal}}$	1.0002	$1.0002^{+0.0051}_{-0.0050}$	$\text{Age}/\text{Gyr}$	13.820	$13.822^{+0.073}_{-0.075}$	$\chi_{\text{prior}}^2$	2.5	$8.5 (\nu: 7.6)$
$H_0$	66.95	$66.9^{+1.9}_{-1.9}$	$z_*$	1090.17	$1090.21^{+0.86}_{-0.83}$			
$\Omega_\Lambda$	0.6798	$0.679^{+0.026}_{-0.028}$	$r_*$	144.38	$144.37^{+0.98}_{-0.98}$			

Best-fit  $\chi_{\text{eff}}^2 = 764.91$ ;  $\bar{\chi}_{\text{eff}}^2 = 784.98$ ;  $R - 1 = 0.00877$   
 $\chi_{\text{eff}}^2$ : CMB - plik\_dx11dr2\_HM\_v18\_TT: 762.36



## 2.32 base\_plikHM\_TTTEEE\_tau07

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022256	$0.02224^{+0.00031}_{-0.00030}$	$A_{143}^{\text{dust}TE}$	0.154	$0.15^{+0.11}_{-0.10}$	$10^5 D/H$	2.613	$2.616^{+0.059}_{-0.058}$
$\Omega_c h^2$	0.12009	$0.1202^{+0.0029}_{-0.0029}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.16}_{-0.16}$	Age/Gyr	13.815	$13.817^{+0.050}_{-0.050}$
$100\theta_{MC}$	1.04073	$1.04073^{+0.00062}_{-0.00062}$	$A_{217}^{\text{dust}TE}$	1.67	$1.67^{+0.50}_{-0.51}$	$z_*$	1090.07	$1090.11^{+0.58}_{-0.58}$
$\tau$	0.0883	$0.086^{+0.031}_{-0.032}$	$c_{100}$	0.99822	$0.9982^{+0.0015}_{-0.0015}$	$r_*$	144.50	$144.48^{+0.64}_{-0.64}$
$\ln(10^{10} A_s)$	3.112	$3.108^{+0.060}_{-0.062}$	$c_{217}$	0.99593	$0.9960^{+0.0028}_{-0.0028}$	$100\theta_*$	1.04093	$1.04093^{+0.00061}_{-0.00062}$
$n_s$	0.9633	$0.9625^{+0.0094}_{-0.0097}$	$y_{cal}$	1.00013	$1.0003^{+0.0050}_{-0.0049}$	$D_A/\text{Gpc}$	13.881	$13.880^{+0.060}_{-0.060}$
$A_{217}^{CIB}$	65.7	$64^{+10}_{-10}$	$H_0$	67.17	$67.1^{+1.3}_{-1.3}$	$z_{drag}$	1059.67	$1059.65^{+0.63}_{-0.63}$
$\xi^{tSZ \times CIB}$	0.18	—	$\Omega_\Lambda$	0.6830	$0.682^{+0.018}_{-0.018}$	$r_{drag}$	147.20	$147.18^{+0.63}_{-0.63}$
$A_{143}^{tSZ}$	7.06	$5.3^{+3.6}_{-3.7}$	$\Omega_m$	0.3170	$0.318^{+0.018}_{-0.018}$	$k_D$	0.14067	$0.14067^{+0.00065}_{-0.00065}$
$A_{100}^{PS}$	256	$262^{+50}_{-50}$	$\Omega_m h^2$	0.14299	$0.1431^{+0.0028}_{-0.0027}$	$100\theta_D$	0.160886	$0.16091^{+0.00036}_{-0.00036}$
$A_{143}^{PS}$	41.4	$44^{+10}_{-20}$	$\Omega_m h^3$	0.09604	$0.09603^{+0.00060}_{-0.00058}$	$z_{eq}$	3402	$3404^{+66}_{-65}$
$A_{143 \times 217}^{PS}$	38.0	$40^{+20}_{-20}$	$\sigma_8$	0.8393	$0.838^{+0.025}_{-0.025}$	$k_{eq}$	0.010382	$0.01039^{+0.00020}_{-0.00020}$
$A_{217}^{PS}$	99.8	$98^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4725	$0.472^{+0.019}_{-0.019}$	$100\theta_{eq}$	0.8129	$0.813^{+0.012}_{-0.012}$
$A^{kSZ}$	0.00	$< 7.94$	$\sigma_8 \Omega_m^{0.25}$	0.6298	$0.629^{+0.020}_{-0.021}$	$100\theta_{s,eq}$	0.4493	$0.4491^{+0.0064}_{-0.0063}$
$A_{100}^{\text{dust}TT}$	7.31	$7.3^{+3.7}_{-3.7}$	$\sigma_8/h^{0.5}$	1.0241	$1.023^{+0.031}_{-0.032}$	$r_{drag}/D_V(0.57)$	0.07127	$0.07124^{+0.00097}_{-0.00095}$
$A_{143}^{\text{dust}TT}$	8.95	$8.9^{+3.6}_{-3.7}$	$\langle d^2 \rangle^{1/2}$	2.535	$2.533^{+0.076}_{-0.077}$	$H(0.57)$	92.83	$92.81^{+0.56}_{-0.53}$
$A_{143 \times 217}^{\text{dust}TT}$	17.7	$17.0^{+8.0}_{-8.1}$	$z_{re}$	10.91	$10.6^{+2.8}_{-2.9}$	$D_A(0.57)$	1393.5	$1394^{+17}_{-17}$
$A_{217}^{\text{dust}TT}$	82.2	$82^{+10}_{-10}$	$10^9 A_s$	2.247	$2.24^{+0.14}_{-0.14}$	$F_{AP}(0.57)$	0.67741	$0.6776^{+0.0046}_{-0.0045}$
$A_{100}^{\text{dust}EE}$	0.0812	$0.081^{+0.011}_{-0.011}$	$10^9 A_s e^{-2\tau}$	1.8836	$1.884^{+0.024}_{-0.024}$	$f\sigma_8(0.57)$	0.4894	$0.489^{+0.015}_{-0.015}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0484	$0.0483^{+0.0095}_{-0.0096}$	$D_{40}$	1248.5	$1250^{+27}_{-27}$	$\sigma_8(0.57)$	0.6230	$0.622^{+0.019}_{-0.019}$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.0998^{+0.064}_{-0.063}$	$D_{220}$	5734	$5736^{+80}_{-78}$	$f_{2000}^{143}$	29.3	$30^{+5}_{-5}$
$A_{143}^{\text{dust}EE}$	0.0997	$0.0995^{+0.013}_{-0.014}$	$D_{810}$	2534.7	$2535^{+27}_{-26}$	$f_{2000}^{143 \times 217}$	32.16	$32^{+4}_{-4}$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.223^{+0.091}_{-0.093}$	$D_{1420}$	813.8	$813.6^{+9.5}_{-9.4}$	$f_{2000}^{217}$	105.70	$106.0^{+3.7}_{-3.6}$
$A_{217}^{\text{dust}EE}$	0.651	$0.65^{+0.26}_{-0.25}$	$D_{2000}$	230.33	$230.2^{+3.3}_{-3.2}$	$\chi_{plik}^2$	2430.6	$2449.8 (\nu: 22.1)$
$A_{100}^{\text{dust}TE}$	0.140	$0.141^{+0.075}_{-0.075}$	$n_{s,0.002}$	0.9633	$0.9625^{+0.0094}_{-0.0097}$	$\chi_{prior}^2$	7.6	$20 (\nu: 16.2)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.057}_{-0.057}$	$Y_P$	0.245342	$0.24533^{+0.00014}_{-0.00014}$			
$A_{100 \times 217}^{\text{dust}TE}$	0.305	$0.30^{+0.17}_{-0.16}$	$Y_P^{BBN}$	0.246669	$0.24666^{+0.00014}_{-0.00014}$			

Best-fit  $\chi_{\text{eff}}^2 = 2438.15$ ;  $\bar{\chi}_{\text{eff}}^2 = 2470.25$ ;  $R - 1 = 0.01136$

$\chi_{\text{eff}}^2$ : CMB - plik\_dx11dr2\_HM.v18\_TTTEEE: 2430.59

### 2.33 base\_CamSpecHM\_TT\_tau07

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02221^{+0.00045}_{-0.00044} \quad (+0.0\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$z_*$	$1090.15^{+0.85}_{-0.83} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1204^{+0.0044}_{-0.0043} \quad (-0.2\sigma)$	$H_0$	$67.1^{+1.9}_{-1.9} \quad (+0.1\sigma)$	$r_*$	$144.45^{+0.97}_{-0.98} \quad (+0.2\sigma)$
$100\theta_{MC}$	$1.04083^{+0.00092}_{-0.00091} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.681^{+0.026}_{-0.028} \quad (+0.2\sigma)$	$100\theta_*$	$1.04104^{+0.00091}_{-0.00089} \quad (+0.1\sigma)$
$\tau$	$0.084^{+0.036}_{-0.035} \quad (+0.0\sigma)$	$\Omega_m$	$0.319^{+0.028}_{-0.026} \quad (-0.2\sigma)$	$z_{drag}$	$1059.57^{+0.90}_{-0.89} \quad (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.102^{+0.068}_{-0.067} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1433^{+0.0042}_{-0.0041} \quad (-0.2\sigma)$	$r_{drag}$	$147.17^{+0.95}_{-0.95} \quad (+0.2\sigma)$
$n_s$	$0.965^{+0.013}_{-0.012} \quad (+0.4\sigma)$	$\Omega_m h^3$	$0.09604^{+0.00088}_{-0.00086} \quad (-0.0\sigma)$	$k_D$	$0.1407^{+0.0010}_{-0.0010} \quad (-0.1\sigma)$
$A_{100}^{PS}$	$247^{+40}_{-40} \quad (-0.5\sigma)$	$\sigma_8$	$0.837^{+0.028}_{-0.028} \quad (-0.1\sigma)$	$100\theta_D$	$0.16095^{+0.00052}_{-0.00050} \quad (-0.0\sigma)$
$A_{143}^{PS}$	$39^{+20}_{-10} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.472^{+0.028}_{-0.027} \quad (-0.2\sigma)$	$z_{eq}$	$3408^{+100}_{-97} \quad (-0.2\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.629^{+0.027}_{-0.026} \quad (-0.1\sigma)$	$100\theta_{eq}$	$0.812^{+0.019}_{-0.018} \quad (+0.2\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$\sigma_8/h^{0.5}$	$1.022^{+0.039}_{-0.039} \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.0712^{+0.0015}_{-0.0014} \quad (+0.2\sigma)$
$A_{143}^{tSZ}$	$< 6.56 \quad (-0.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.523^{+0.092}_{-0.093} \quad (-0.2\sigma)$	$H(0.57)$	$92.79^{+0.84}_{-0.79} \quad (+0.1\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.22}_{-0.20}$	$z_{re}$	$10.5^{+3.0}_{-3.2} \quad (+0.0\sigma)$	$D_A(0.57)$	$1395^{+26}_{-26} \quad (-0.1\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s$	$2.22^{+0.16}_{-0.15} \quad (-0.1\sigma)$	$F_{AP}(0.57)$	$0.6779^{+0.0070}_{-0.0067} \quad (-0.2\sigma)$
$A^{kSZ}$	—	$10^9 A_s e^{-2\tau}$	$1.879^{+0.027}_{-0.028} \quad (-0.4\sigma)$	$f\sigma_8(0.57)$	$0.488^{+0.018}_{-0.019} \quad (-0.1\sigma)$
$A_{100}^{dust}$	$0.98^{+0.38}_{-0.37}$	$D_{40}$	$1240^{+32}_{-31} \quad (-0.6\sigma)$	$\sigma_8(0.57)$	$0.621^{+0.021}_{-0.021} \quad (-0.0\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.35}$	$D_{220}$	$5702^{+79}_{-80} \quad (-0.6\sigma)$	$Y_P^{BBN}$	$0.24623^{+0.00019}_{-0.00019} \quad (-3.9\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$D_{810}$	$2529^{+27}_{-26} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.4\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$D_{1420}$	$813^{+10}_{-9.8} \quad (-0.1\sigma)$	$f_{2000}^{217}$	$106.5^{+3.9}_{-3.9} \quad (+0.1\sigma)$
$y_{cal}$	$1.0000^{+0.0048}_{-0.0049} \quad (-0.1\sigma)$	$n_{s,0.002}$	$0.965^{+0.013}_{-0.012} \quad (+0.4\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.4\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$Y_P$	$0.24490^{+0.00019}_{-0.00019} \quad (-3.9\sigma)$	$\chi_{CamSpec}^2$	$8058.7 \quad (\nu: 15.9)$
$c_{217}$	$0.9972^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$Age/Gyr$	$13.818^{+0.074}_{-0.075} \quad (-0.1\sigma)$	$\chi_{prior}^2$	$9.6 \quad (\nu: 7.5) \quad (+0.3\sigma)$

$$\bar{\chi}_{eff}^2 = 8068.30; \Delta \bar{\chi}_{eff}^2 = 7283.32; R - 1 = 0.00531$$

### 2.34 base\_plikHM\_TT\_lowl

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02249	$0.02240^{+0.00054}_{-0.00053}$	$\Omega_m$	0.3002	$0.305^{+0.032}_{-0.030}$	$100\theta_*$	1.04136	$1.0413^{+0.0010}_{-0.0010}$
$\Omega_c h^2$	0.1175	$0.1181^{+0.0051}_{-0.0050}$	$\Omega_m h^2$	0.14060	$0.1411^{+0.0048}_{-0.0046}$	$D_A/\text{Gpc}$	13.924	$13.917^{+0.097}_{-0.099}$
$100\theta_{\text{MC}}$	1.04119	$1.0411^{+0.0010}_{-0.0010}$	$\Omega_m h^3$	0.09623	$0.09612^{+0.00091}_{-0.00090}$	$z_{\text{drag}}$	1060.05	$1059.9^{+1.0}_{-0.99}$
$\tau$	0.125	$0.112^{+0.062}_{-0.068}$	$\sigma_8$	0.8610	$0.852^{+0.043}_{-0.047}$	$r_{\text{drag}}$	147.63	$147.6^{+1.0}_{-1.0}$
$\ln(10^{10} A_s)$	3.179	$3.15^{+0.12}_{-0.13}$	$\sigma_8 \Omega_m^{0.5}$	0.4718	$0.470^{+0.027}_{-0.026}$	$k_D$	0.14039	$0.1404^{+0.0010}_{-0.0010}$
$n_s$	0.9742	$0.971^{+0.016}_{-0.015}$	$\sigma_8 \Omega_m^{0.25}$	0.6373	$0.633^{+0.030}_{-0.031}$	$100\theta_D$	0.16071	$0.16081^{+0.00057}_{-0.00056}$
$y_{\text{cal}}$	1.00027	$1.0002^{+0.0049}_{-0.0049}$	$\sigma_8/h^{0.5}$	1.0408	$1.032^{+0.048}_{-0.051}$	$z_{\text{eq}}$	3345	$3357^{+110}_{-110}$
$A_{217}^{\text{CIB}}$	61.1	$62^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.567	$2.55^{+0.11}_{-0.12}$	$k_{\text{eq}}$	0.010208	$0.01025^{+0.00035}_{-0.00034}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.56	—	$z_{\text{re}}$	13.8	$12.6^{+5.1}_{-5.5}$	$100\theta_{\text{eq}}$	0.8243	$0.822^{+0.022}_{-0.022}$
$A_{143}^{\text{tSZ}}$	6.84	$5.4^{+3.6}_{-3.8}$	$10^9 A_s$	2.402	$2.35^{+0.28}_{-0.29}$	$100\theta_{s,\text{eq}}$	0.4550	$0.454^{+0.011}_{-0.011}$
$A_{100}^{\text{PS}}$	243	$252^{+60}_{-60}$	$10^9 A_s e^{-2\tau}$	1.8705	$1.872^{+0.030}_{-0.030}$	$r_{\text{drag}}/D_V(0.57)$	0.07221	$0.0720^{+0.0018}_{-0.0017}$
$A_{143}^{\text{PS}}$	43.0	$41^{+20}_{-20}$	$D_{40}$	1242.3	$1244^{+32}_{-31}$	$H(0.57)$	93.39	$93.2^{+1.1}_{-1.0}$
$A_{143 \times 217}^{\text{PS}}$	46.1	$39^{+20}_{-20}$	$D_{220}$	5722	$5721^{+82}_{-81}$	$D_A(0.57)$	1376.4	$1381^{+31}_{-32}$
$A_{217}^{\text{PS}}$	104.1	$98^{+20}_{-20}$	$D_{810}$	2531.6	$2530^{+27}_{-27}$	$F_{\text{AP}}(0.57)$	0.6731	$0.6742^{+0.0081}_{-0.0077}$
$A^{\text{kSZ}}$	0.00	$< 7.57$	$D_{1420}$	816.5	$814.9^{+9.9}_{-9.8}$	$f\sigma_8(0.57)$	0.4975	$0.493^{+0.023}_{-0.025}$
$A_{100}^{\text{dustTT}}$	7.31	$7.4^{+3.7}_{-3.7}$	$D_{2000}$	232.38	$231.4^{+4.0}_{-4.1}$	$\sigma_8(0.57)$	0.6435	$0.636^{+0.036}_{-0.039}$
$A_{143}^{\text{dustTT}}$	9.07	$9.0^{+3.6}_{-3.7}$	$n_{s,0.002}$	0.9742	$0.971^{+0.016}_{-0.015}$	$f_{2000}^{143}$	26.6	$28^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	18.0	$16.9^{+8.1}_{-8.3}$	$Y_P$	0.245446	$0.24540^{+0.00024}_{-0.00024}$	$f_{2000}^{143 \times 217}$	30.07	$31^{+5}_{-5}$
$A_{217}^{\text{dustTT}}$	82.9	$82^{+10}_{-10}$	$Y_P^{\text{BBN}}$	0.246773	$0.24673^{+0.00024}_{-0.00024}$	$f_{2000}^{217}$	103.68	$104.7^{+4.4}_{-4.4}$
$c_{100}$	0.99796	$0.9979^{+0.0015}_{-0.0015}$	$10^5 D/H$	2.569	$2.59^{+0.10}_{-0.099}$	$\chi_{\text{lowl}}^2$	15.39	$15.6 (\nu: 1.5)$
$c_{217}$	0.99555	$0.9958^{+0.0029}_{-0.0029}$	Age/Gyr	13.766	$13.781^{+0.092}_{-0.095}$	$\chi_{\text{plik}}^2$	761.1	$775.6 (\nu: 16.1)$
$H_0$	68.44	$68.1^{+2.4}_{-2.4}$	$z_*$	1089.55	$1089.7^{+1.0}_{-1.0}$	$\chi_{\text{prior}}^2$	1.6	$7.2 (\nu: 6.2)$
$\Omega_\Lambda$	0.6998	$0.695^{+0.030}_{-0.032}$	$r_*$	145.00	$144.9^{+1.1}_{-1.1}$	$\chi_{\text{CMB}}^2$	776.5	$791.1 (\nu: 15.3)$

Best-fit  $\chi_{\text{eff}}^2 = 778.06$ ;  $\bar{\chi}_{\text{eff}}^2 = 798.39$ ;  $R - 1 = 0.00655$

$\chi_{\text{eff}}^2$ : CMB - commander\_rc2\_v1.1\_l2\_29\_B: 15.39 plik\_dx11dr2\_HM\_v18\_TT: 761.09

## 2.35 base\_plikHM\_TT\_lowl\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022416	$0.02237^{+0.00042}_{-0.00040}$	$\Omega_m h^3$	0.09617	$0.09611^{+0.00091}_{-0.00087}$	$k_D$	0.14048	$0.14044^{+0.00088}_{-0.00085}$
$\Omega_c h^2$	0.11831	$0.1185^{+0.0026}_{-0.0026}$	$\sigma_8$	0.8571	$0.851^{+0.043}_{-0.045}$	$100\theta_D$	0.16077	$0.16083^{+0.00052}_{-0.00052}$
$100\theta_{MC}$	1.04103	$1.04103^{+0.00084}_{-0.00085}$	$\sigma_8 \Omega_m^{0.5}$	0.4738	$0.471^{+0.024}_{-0.024}$	$z_{eq}$	3363	$3367^{+60}_{-60}$
$\tau$	0.116	$0.108^{+0.055}_{-0.056}$	$\sigma_8 \Omega_m^{0.25}$	0.6372	$0.633^{+0.031}_{-0.032}$	$k_{eq}$	0.010264	$0.01028^{+0.00018}_{-0.00018}$
$\ln(10^{10} A_s)$	3.164	$3.15^{+0.11}_{-0.11}$	$\sigma_8/h^{0.5}$	1.039	$1.032^{+0.049}_{-0.053}$	$100\theta_{eq}$	0.8206	$0.820^{+0.012}_{-0.011}$
$n_s$	0.9720	$0.9698^{+0.0099}_{-0.0098}$	$\langle d^2 \rangle^{1/2}$	2.562	$2.55^{+0.12}_{-0.13}$	$100\theta_{s,eq}$	0.4532	$0.4528^{+0.0059}_{-0.0058}$
$y_{cal}$	1.00039	$1.0003^{+0.0047}_{-0.0049}$	$z_{re}$	13.14	$12.4^{+4.4}_{-4.7}$	$r_{drag}/D_V(0.57)$	0.07190	$0.07184^{+0.00091}_{-0.00087}$
$A_{217}^{CIB}$	61.7	$62^{+10}_{-10}$	$10^9 A_s$	2.366	$2.33^{+0.20}_{-0.25}$	$H(0.57)$	93.20	$93.15^{+0.59}_{-0.58}$
$\xi^{tSZ \times CIB}$	0.55	—	$10^9 A_s e^{-2\tau}$	1.8744	$1.874^{+0.023}_{-0.023}$	$D_A(0.57)$	1381.9	$1383^{+16}_{-17}$
$A_{143}^{tSZ}$	6.78	$5.4^{+3.6}_{-3.7}$	$D_{40}$	1241.9	$1244^{+32}_{-30}$	$F_{AP}(0.57)$	0.67451	$0.6749^{+0.0040}_{-0.0040}$
$A_{100}^{PS}$	245	$253^{+50}_{-50}$	$D_{220}$	5718	$5720^{+80}_{-79}$	$f\sigma_8(0.57)$	0.4967	$0.493^{+0.024}_{-0.025}$
$A_{143}^{PS}$	44.0	$41^{+20}_{-20}$	$D_{810}$	2532.9	$2531^{+27}_{-27}$	$\sigma_8(0.57)$	0.6392	$0.634^{+0.033}_{-0.035}$
$A_{143 \times 217}^{PS}$	46.5	$39^{+20}_{-20}$	$D_{1420}$	816.3	$814.7^{+9.4}_{-9.6}$	$f_{2000}^{143}$	27.2	$28^{+6}_{-6}$
$A_{217}^{PS}$	104.1	$98^{+20}_{-20}$	$D_{2000}$	232.06	$231.3^{+3.6}_{-3.7}$	$f_{2000}^{143 \times 217}$	30.51	$31^{+4}_{-4}$
$A^{kSZ}$	0.00	$< 7.73$	$n_{s,0.002}$	0.9720	$0.9698^{+0.0099}_{-0.0098}$	$f_{2000}^{217}$	104.11	$104.9^{+4.1}_{-4.2}$
$A_{100}^{dustTT}$	7.32	$7.4^{+3.7}_{-3.7}$	$Y_P$	0.245413	$0.24539^{+0.00018}_{-0.00019}$	$\chi_{lowl}^2$	15.25	$15.5 (\nu: 1.5)$
$A_{143}^{dustTT}$	9.03	$8.9^{+3.6}_{-3.5}$	$Y_P^{BBN}$	0.246739	$0.24672^{+0.00019}_{-0.00019}$	$\chi_{plik}^2$	761.4	$774.9 (\nu: 15.5)$
$A_{143 \times 217}^{dustTT}$	17.9	$16.9^{+8.0}_{-8.1}$	$10^5 D/H$	2.583	$2.592^{+0.077}_{-0.077}$	$\chi_{6DF}^2$	0.001	$0.050 (\nu: 0.0)$
$A_{217}^{dustTT}$	82.7	$82^{+10}_{-10}$	Age/Gyr	13.782	$13.788^{+0.060}_{-0.060}$	$\chi_{MGS}^2$	1.61	$1.58 (\nu: 0.2)$
$c_{100}$	0.99798	$0.9979^{+0.0015}_{-0.0016}$	$z_*$	1089.72	$1089.80^{+0.64}_{-0.63}$	$\chi_{DR11CMass}^2$	2.44	$2.91 (\nu: 0.3)$
$c_{217}$	0.99560	$0.9958^{+0.0029}_{-0.0029}$	$r_*$	144.83	$144.82^{+0.64}_{-0.64}$	$\chi_{DR11LOWZ}^2$	0.33	$0.55 (\nu: 0.1)$
$H_0$	68.02	$67.9^{+1.2}_{-1.2}$	$100\theta_*$	1.04121	$1.04122^{+0.00083}_{-0.00083}$	$\chi_{prior}^2$	1.5	$7.2 (\nu: 6.2)$
$\Omega_\Lambda$	0.6945	$0.693^{+0.016}_{-0.016}$	$D_A/\text{Gpc}$	13.910	$13.909^{+0.061}_{-0.062}$	$\chi_{BAO}^2$	4.38	$5.1 (\nu: 0.6)$
$\Omega_m$	0.3055	$0.307^{+0.016}_{-0.016}$	$z_{drag}$	1059.93	$1059.82^{+0.92}_{-0.88}$	$\chi_{CMB}^2$	776.7	$790.4 (\nu: 14.6)$
$\Omega_m h^2$	0.14137	$0.1415^{+0.0025}_{-0.0025}$	$r_{drag}$	147.49	$147.49^{+0.68}_{-0.67}$			

Best-fit  $\chi_{eff}^2 = 782.58$ ;  $\bar{\chi}_{eff}^2 = 802.73$ ;  $R - 1 = 0.00934$

$\chi_{eff}^2$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMass: 2.44 DR11LOWZ: 0.33 CMB - commander\_rc2\_v1.1\_l2\_29\_B: 15.25 plik\_dx11dr2\_HM\_v18\_TT: 761.44

## 2.36 base\_plikHM\_TT\_lowl\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022444	$0.02239^{+0.00041}_{-0.00039}$	$\sigma_8$	0.8573	$0.852^{+0.042}_{-0.045}$	$z_{\text{eq}}$	3362	$3361^{+58}_{-58}$
$\Omega_c h^2$	0.11823	$0.1182^{+0.0026}_{-0.0025}$	$\sigma_8 \Omega_m^{0.5}$	0.4732	$0.471^{+0.024}_{-0.024}$	$k_{\text{eq}}$	0.010260	$0.01026^{+0.00018}_{-0.00018}$
$100\theta_{\text{MC}}$	1.04113	$1.04107^{+0.00084}_{-0.00084}$	$\sigma_8 \Omega_m^{0.25}$	0.6369	$0.633^{+0.030}_{-0.032}$	$100\theta_{\text{eq}}$	0.8210	$0.821^{+0.011}_{-0.011}$
$\tau$	0.117	$0.111^{+0.050}_{-0.056}$	$\sigma_8/h^{0.5}$	1.039	$1.033^{+0.049}_{-0.052}$	$100\theta_{\text{s,eq}}$	0.4533	$0.4534^{+0.0057}_{-0.0055}$
$\ln(10^{10} A_s)$	3.165	$3.152^{+0.099}_{-0.11}$	$\langle d^2 \rangle^{1/2}$	2.564	$2.55^{+0.12}_{-0.12}$	$r_{\text{drag}}/D_V(0.57)$	0.07196	$0.07193^{+0.00087}_{-0.00084}$
$n_s$	0.9716	$0.9706^{+0.0097}_{-0.0098}$	$z_{\text{re}}$	13.19	$12.6^{+4.3}_{-4.5}$	$H(0.57)$	93.26	$93.20^{+0.58}_{-0.55}$
$y_{\text{cal}}$	1.00026	$1.0003^{+0.0047}_{-0.0049}$	$10^9 A_s$	2.369	$2.34^{+0.24}_{-0.25}$	$D_A(0.57)$	1380.7	$1382^{+16}_{-16}$
$A_{217}^{\text{CIB}}$	62.9	$62^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8740	$1.873^{+0.023}_{-0.023}$	$F_{\text{AP}}(0.57)$	0.67428	$0.6744^{+0.0039}_{-0.0038}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.37	—	$D_{40}$	1243.7	$1243^{+32}_{-30}$	$f\sigma_8(0.57)$	0.4966	$0.493^{+0.024}_{-0.025}$
$A_{143}^{\text{tSZ}}$	6.89	$5.4^{+3.6}_{-3.7}$	$D_{220}$	5723	$5721^{+80}_{-79}$	$\sigma_8(0.57)$	0.6395	$0.635^{+0.032}_{-0.034}$
$A_{100}^{\text{PS}}$	246	$252^{+50}_{-50}$	$D_{810}$	2532.4	$2531^{+27}_{-27}$	$f_{2000}^{143}$	27.2	$28^{+6}_{-6}$
$A_{143}^{\text{PS}}$	40.7	$41^{+20}_{-20}$	$D_{1420}$	816.0	$814.9^{+9.3}_{-9.6}$	$f_{2000}^{143 \times 217}$	30.39	$31^{+4}_{-4}$
$A_{143 \times 217}^{\text{PS}}$	41.0	$38^{+20}_{-20}$	$D_{2000}$	232.00	$231.4^{+3.6}_{-3.6}$	$f_{2000}^{217}$	104.08	$104.7^{+4.1}_{-4.1}$
$A_{217}^{\text{PS}}$	101.7	$98^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9716	$0.9706^{+0.0097}_{-0.0098}$	$\chi_{\text{lowl}}^2$	15.46	$15.5 (\nu: 1.5)$
$A^{\text{kSZ}}$	0.02	$< 7.68$	$Y_{\text{P}}$	0.245425	$0.24540^{+0.00018}_{-0.00018}$	$\chi_{\text{plik}}^2$	761.0	$774.8 (\nu: 15.5)$
$A_{100}^{\text{dustTT}}$	7.32	$7.4^{+3.7}_{-3.7}$	$Y_{\text{P}}^{\text{BBN}}$	0.246752	$0.24673^{+0.00018}_{-0.00018}$	$\chi_{\text{H070p6}}^2$	0.56	$0.62 (\nu: 0.0)$
$A_{143}^{\text{dustTT}}$	8.96	$8.9^{+3.6}_{-3.5}$	$10^5 D/H$	2.578	$2.587^{+0.075}_{-0.077}$	$\chi_{\text{JLA}}^2$	706.587	$706.65 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.4	$16.9^{+7.9}_{-8.2}$	$\text{Age/Gyr}$	13.776	$13.783^{+0.057}_{-0.058}$	$\chi_{6\text{DF}}^2$	0.000	$0.043 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	81.8	$82^{+10}_{-10}$	$z_*$	1089.67	$1089.74^{+0.63}_{-0.62}$	$\chi_{\text{MGS}}^2$	1.68	$1.71 (\nu: 0.2)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0016}$	$r_*$	144.83	$144.87^{+0.63}_{-0.62}$	$\chi_{\text{DR11CMass}}^2$	2.47	$2.92 (\nu: 0.3)$
$c_{217}$	0.99560	$0.9958^{+0.0028}_{-0.0029}$	$100\theta_*$	1.04130	$1.04125^{+0.00082}_{-0.00082}$	$\chi_{\text{DR11LOWZ}}^2$	0.28	$0.44 (\nu: 0.1)$
$H_0$	68.11	$68.0^{+1.2}_{-1.1}$	$D_A/\text{Gpc}$	13.909	$13.913^{+0.061}_{-0.060}$	$\chi_{\text{prior}}^2$	1.7	$7.2 (\nu: 6.2)$
$\Omega_\Lambda$	0.6954	$0.695^{+0.015}_{-0.015}$	$z_{\text{drag}}$	1059.97	$1059.86^{+0.91}_{-0.87}$	$\chi_{\text{BAO}}^2$	4.43	$5.1 (\nu: 0.6)$
$\Omega_m$	0.3046	$0.305^{+0.015}_{-0.015}$	$r_{\text{drag}}$	147.48	$147.53^{+0.68}_{-0.67}$	$\chi_{\text{CMB}}^2$	776.5	$790.4 (\nu: 14.6)$
$\Omega_m h^2$	0.14132	$0.1413^{+0.0024}_{-0.0024}$	$k_{\text{D}}$	0.14051	$0.14042^{+0.00088}_{-0.00086}$			
$\Omega_m h^3$	0.09625	$0.09613^{+0.00091}_{-0.00087}$	$100\theta_{\text{D}}$	0.16074	$0.16081^{+0.00051}_{-0.00051}$			

Best-fit  $\chi_{\text{eff}}^2 = 1489.81$ ;  $\bar{\chi}_{\text{eff}}^2 = 1509.93$ ;  $R - 1 = 0.00850$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.68 DR11CMass: 2.48 DR11LOWZ: 0.28 CMB - commander\_rc2\_v1.1\_l2\_29\_B: 15.46 plik\_dx11dr2\_HM\_v18\_TT: 761.02 Hubble - H070p6: 0.56 SN - JLA December\_2013: 706.59

### 2.37 base\_plikHM\_TT\_lowl\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02241^{+0.00053}_{-0.00052}$	$\Omega_m$	$0.304^{+0.031}_{-0.029}$	$100\theta_*$	$1.04129^{+0.00099}_{-0.00098}$
$\Omega_c h^2$	$0.1180^{+0.0050}_{-0.0049}$	$\Omega_m h^2$	$0.1410^{+0.0046}_{-0.0046}$	$D_A/\text{Gpc}$	$13.918^{+0.096}_{-0.097}$
$100\theta_{\text{MC}}$	$1.0411^{+0.0010}_{-0.0010}$	$\Omega_m h^3$	$0.09613^{+0.00090}_{-0.00088}$	$z_{\text{drag}}$	$1059.9^{+1.0}_{-0.97}$
$\tau$	$0.114^{+0.060}_{-0.059}$	$\sigma_8$	$0.853^{+0.042}_{-0.042}$	$r_{\text{drag}}$	$147.6^{+1.0}_{-1.0}$
$\ln(10^{10} A_s)$	$3.16^{+0.11}_{-0.11}$	$\sigma_8 \Omega_m^{0.5}$	$0.470^{+0.027}_{-0.025}$	$k_D$	$0.1404^{+0.0010}_{-0.0010}$
$n_s$	$0.971^{+0.015}_{-0.015}$	$\sigma_8 \Omega_m^{0.25}$	$0.633^{+0.030}_{-0.029}$	$100\theta_D$	$0.16080^{+0.00057}_{-0.00055}$
$y_{\text{cal}}$	$1.0002^{+0.0048}_{-0.0048}$	$\sigma_8/h^{0.5}$	$1.034^{+0.047}_{-0.047}$	$z_{\text{eq}}$	$3355^{+110}_{-110}$
$A_{217}^{\text{CIB}}$	$62^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	$2.55^{+0.11}_{-0.11}$	$k_{\text{eq}}$	$0.01024^{+0.00034}_{-0.00034}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$z_{\text{re}}$	$12.8^{+4.6}_{-5.0}$	$100\theta_{\text{eq}}$	$0.822^{+0.022}_{-0.021}$
$A_{143}^{\text{tSZ}}$	$5.5^{+3.5}_{-3.7}$	$10^9 A_s$	$2.36^{+0.27}_{-0.27}$	$100\theta_{s,\text{eq}}$	$0.454^{+0.011}_{-0.011}$
$A_{100}^{\text{PS}}$	$251^{+60}_{-50}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.029}_{-0.029}$	$r_{\text{drag}}/D_V(0.57)$	$0.0720^{+0.0018}_{-0.0017}$
$A_{143}^{\text{PS}}$	$41^{+20}_{-20}$	$D_{40}$	$1244^{+32}_{-31}$	$H(0.57)$	$93.3^{+1.1}_{-0.98}$
$A_{143 \times 217}^{\text{PS}}$	$38^{+20}_{-20}$	$D_{220}$	$5721^{+81}_{-80}$	$D_A(0.57)$	$1380^{+30}_{-31}$
$A_{217}^{\text{PS}}$	$98^{+20}_{-20}$	$D_{810}$	$2530^{+27}_{-27}$	$F_{\text{AP}}(0.57)$	$0.6741^{+0.0078}_{-0.0077}$
$A^{\text{kSZ}}$	$< 7.56$	$D_{1420}$	$815.0^{+9.9}_{-9.8}$	$f\sigma_8(0.57)$	$0.494^{+0.023}_{-0.023}$
$A_{100}^{\text{dustTT}}$	$7.4^{+3.8}_{-3.7}$	$D_{2000}$	$231.5^{+4.0}_{-4.0}$	$\sigma_8(0.57)$	$0.637^{+0.035}_{-0.034}$
$A_{143}^{\text{dustTT}}$	$8.9^{+3.6}_{-3.6}$	$n_{s,0.002}$	$0.971^{+0.015}_{-0.015}$	$f_{2000}^{143}$	$28^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	$16.9^{+8.1}_{-8.1}$	$Y_{\text{P}}$	$0.24541^{+0.00023}_{-0.00024}$	$f_{2000}^{143 \times 217}$	$31^{+5}_{-5}$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24674^{+0.00023}_{-0.00024}$	$f_{2000}^{217}$	$104.6^{+4.3}_{-4.3}$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$10^5 \text{D/H}$	$2.584^{+0.099}_{-0.097}$	$\chi_{\text{lowl}}^2$	$15.6 (\nu: 1.5)$
$c_{217}$	$0.9958^{+0.0029}_{-0.0029}$	$\text{Age/Gyr}$	$13.779^{+0.089}_{-0.092}$	$\chi_{\text{plik}}^2$	$775.3 (\nu: 15.3)$
$H_0$	$68.2^{+2.4}_{-2.3}$	$z_*$	$1089.70^{+0.99}_{-0.99}$	$\chi_{\text{prior}}^2$	$7.2 (\nu: 6.1)$
$\Omega_\Lambda$	$0.696^{+0.029}_{-0.031}$	$r_*$	$144.9^{+1.1}_{-1.1}$	$\chi_{\text{CMB}}^2$	$790.9 (\nu: 14.7)$

$$\bar{\chi}_{\text{eff}}^2 = 798.12; R - 1 = 0.00960$$

### 2.38 base\_plikHM\_TT\_lowl\_post\_BAO\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00042}_{-0.00040}$	$\Omega_m h^3$	$0.09612^{+0.00091}_{-0.00086}$	$k_D$	$0.14044^{+0.00088}_{-0.00085}$
$\Omega_c h^2$	$0.1185^{+0.0026}_{-0.0026}$	$\sigma_8$	$0.851^{+0.042}_{-0.042}$	$100\theta_D$	$0.16083^{+0.00051}_{-0.00052}$
$100\theta_{MC}$	$1.04103^{+0.00084}_{-0.00084}$	$\sigma_8 \Omega_m^{0.5}$	$0.471^{+0.024}_{-0.023}$	$z_{eq}$	$3366^{+60}_{-59}$
$\tau$	$0.109^{+0.050}_{-0.053}$	$\sigma_8 \Omega_m^{0.25}$	$0.634^{+0.030}_{-0.030}$	$k_{eq}$	$0.01027^{+0.00018}_{-0.00018}$
$\ln(10^{10} A_s)$	$3.15^{+0.10}_{-0.10}$	$\sigma_8/h^{0.5}$	$1.033^{+0.049}_{-0.049}$	$100\theta_{eq}$	$0.820^{+0.011}_{-0.011}$
$n_s$	$0.9699^{+0.0098}_{-0.0096}$	$\langle d^2 \rangle^{1/2}$	$2.55^{+0.11}_{-0.12}$	$100\theta_{s,eq}$	$0.4528^{+0.0059}_{-0.0057}$
$y_{cal}$	$1.0002^{+0.0047}_{-0.0049}$	$z_{re}$	$12.5^{+4.1}_{-4.5}$	$r_{drag}/D_V(0.57)$	$0.07184^{+0.00091}_{-0.00087}$
$A_{217}^{CIB}$	$62^{+10}_{-10}$	$10^9 A_s$	$2.33^{+0.24}_{-0.23}$	$H(0.57)$	$93.15^{+0.59}_{-0.57}$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.874^{+0.023}_{-0.023}$	$D_A(0.57)$	$1383^{+16}_{-16}$
$A_{143}^{tSZ}$	$5.4^{+3.6}_{-3.7}$	$D_{40}$	$1244^{+32}_{-30}$	$F_{AP}(0.57)$	$0.6748^{+0.0040}_{-0.0040}$
$A_{100}^{PS}$	$253^{+50}_{-50}$	$D_{220}$	$5720^{+80}_{-79}$	$f\sigma_8(0.57)$	$0.494^{+0.023}_{-0.023}$
$A_{143}^{PS}$	$41^{+10}_{-20}$	$D_{810}$	$2531^{+27}_{-27}$	$\sigma_8(0.57)$	$0.634^{+0.033}_{-0.032}$
$A_{143 \times 217}^{PS}$	$39^{+20}_{-20}$	$D_{1420}$	$814.7^{+9.3}_{-9.6}$	$f_{2000}^{143}$	$28^{+6}_{-6}$
$A_{217}^{PS}$	$98^{+20}_{-20}$	$D_{2000}$	$231.3^{+3.6}_{-3.6}$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4}$
$A^{kSZ}$	$< 7.73$	$n_{s,0.002}$	$0.9699^{+0.0098}_{-0.0096}$	$f_{2000}^{217}$	$104.8^{+4.1}_{-4.2}$
$A_{100}^{dustTT}$	$7.4^{+3.7}_{-3.7}$	$Y_P$	$0.24539^{+0.00018}_{-0.00019}$	$\chi_{lowl}^2$	$15.6 (\nu: 1.5)$
$A_{143}^{dustTT}$	$8.9^{+3.6}_{-3.5}$	$Y_P^{BBN}$	$0.24672^{+0.00018}_{-0.00019}$	$\chi_{plik}^2$	$774.8 (\nu: 15.0)$
$A_{143 \times 217}^{dustTT}$	$16.9^{+8.0}_{-8.2}$	$10^5 D/H$	$2.592^{+0.076}_{-0.077}$	$\chi_{6DF}^2$	$0.049 (\nu: 0.0)$
$A_{217}^{dustTT}$	$82^{+10}_{-10}$	$Age/Gyr$	$13.788^{+0.059}_{-0.059}$	$\chi_{MGS}^2$	$1.59 (\nu: 0.2)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0016}$	$z_*$	$1089.79^{+0.63}_{-0.63}$	$\chi_{DR11CMass}^2$	$2.91 (\nu: 0.3)$
$c_{217}$	$0.9958^{+0.0029}_{-0.0030}$	$r_*$	$144.82^{+0.64}_{-0.64}$	$\chi_{DR11LOWZ}^2$	$0.54 (\nu: 0.1)$
$H_0$	$67.9^{+1.2}_{-1.2}$	$100\theta_*$	$1.04122^{+0.00083}_{-0.00082}$	$\chi_{prior}^2$	$7.2 (\nu: 6.2)$
$\Omega_\Lambda$	$0.693^{+0.016}_{-0.016}$	$D_A/Gpc$	$13.909^{+0.061}_{-0.061}$	$\chi_{BAO}^2$	$5.1 (\nu: 0.6)$
$\Omega_m$	$0.307^{+0.016}_{-0.016}$	$z_{drag}$	$1059.83^{+0.92}_{-0.88}$	$\chi_{CMB}^2$	$790.4 (\nu: 14.4)$
$\Omega_m h^2$	$0.1415^{+0.0025}_{-0.0025}$	$r_{drag}$	$147.49^{+0.68}_{-0.68}$		

$$\bar{\chi}_{eff}^2 = 802.64; R - 1 = 0.00939$$

### 2.39 base\_plikHM\_TTTEEE\_lowl

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022371	$0.02232^{+0.00033}_{-0.00033}$	$A_{100 \times 217}^{\text{dust}TE}$	0.301	$0.30^{+0.17}_{-0.17}$	$10^5 \text{D/H}$	2.591	$2.602^{+0.063}_{-0.062}$
$\Omega_c h^2$	0.11884	$0.1192^{+0.0031}_{-0.0031}$	$A_{143}^{\text{dust}TE}$	0.154	$0.15^{+0.11}_{-0.11}$	Age/Gyr	13.794	$13.801^{+0.055}_{-0.056}$
$100\theta_{\text{MC}}$	1.04087	$1.04085^{+0.00066}_{-0.00065}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.16}_{-0.16}$	$z_*$	1089.82	$1089.91^{+0.63}_{-0.63}$
$\tau$	0.1078	$0.099^{+0.047}_{-0.050}$	$A_{217}^{\text{dust}TE}$	1.66	$1.66^{+0.51}_{-0.50}$	$r_*$	144.73	$144.69^{+0.68}_{-0.67}$
$\ln(10^{10} A_s)$	3.148	$3.132^{+0.090}_{-0.095}$	$c_{100}$	0.99826	$0.9982^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04106	$1.04104^{+0.00065}_{-0.00064}$
$n_s$	0.9690	$0.967^{+0.011}_{-0.010}$	$c_{217}$	0.99572	$0.9959^{+0.0029}_{-0.0028}$	$D_A/\text{Gpc}$	13.902	$13.899^{+0.063}_{-0.062}$
$y_{\text{cal}}$	1.00018	$1.0003^{+0.0050}_{-0.0049}$	$H_0$	67.75	$67.6^{+1.4}_{-1.4}$	$z_{\text{drag}}$	1059.86	$1059.75^{+0.64}_{-0.65}$
$A_{217}^{\text{CIB}}$	61.5	$63^{+10}_{-10}$	$\Omega_\Lambda$	0.6909	$0.689^{+0.019}_{-0.020}$	$r_{\text{drag}}$	147.40	$147.38^{+0.66}_{-0.66}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.63	—	$\Omega_m$	0.3091	$0.311^{+0.020}_{-0.019}$	$k_D$	0.14054	$0.14053^{+0.00068}_{-0.00067}$
$A_{143}^{\text{tSZ}}$	6.83	$5.5^{+3.5}_{-3.7}$	$\Omega_m h^2$	0.14186	$0.1421^{+0.0029}_{-0.0029}$	$100\theta_D$	0.160786	$0.16085^{+0.00037}_{-0.00036}$
$A_{100}^{\text{PS}}$	248	$257^{+50}_{-50}$	$\Omega_m h^3$	0.09610	$0.09604^{+0.00059}_{-0.00059}$	$z_{\text{eq}}$	3374	$3381^{+70}_{-70}$
$A_{143}^{\text{PS}}$	45.9	$42^{+10}_{-20}$	$\sigma_8$	0.8516	$0.846^{+0.035}_{-0.037}$	$k_{\text{eq}}$	0.010299	$0.01032^{+0.00021}_{-0.00021}$
$A_{143 \times 217}^{\text{PS}}$	49.8	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4735	$0.472^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	0.8182	$0.817^{+0.014}_{-0.013}$
$A_{217}^{\text{PS}}$	105.4	$98^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6350	$0.632^{+0.025}_{-0.026}$	$100\theta_{s,\text{eq}}$	0.4520	$0.4513^{+0.0070}_{-0.0067}$
$A^{\text{kSZ}}$	0.00	$< 7.37$	$\sigma_8/h^{0.5}$	1.0347	$1.029^{+0.041}_{-0.043}$	$r_{\text{drag}}/D_V(0.57)$	0.07170	$0.0716^{+0.0011}_{-0.0010}$
$A_{100}^{\text{dust}TT}$	7.34	$7.4^{+3.7}_{-3.6}$	$\langle d^2 \rangle^{1/2}$	2.555	$2.543^{+0.096}_{-0.10}$	$H(0.57)$	93.07	$93.00^{+0.63}_{-0.61}$
$A_{143}^{\text{dust}TT}$	8.85	$8.9^{+3.6}_{-3.6}$	$z_{\text{re}}$	12.48	$11.7^{+4.0}_{-4.3}$	$D_A(0.57)$	1385.7	$1388^{+19}_{-19}$
$A_{143 \times 217}^{\text{dust}TT}$	17.9	$16.8^{+8.1}_{-8.1}$	$10^9 A_s$	2.330	$2.30^{+0.21}_{-0.21}$	$F_{\text{AP}}(0.57)$	0.67542	$0.6760^{+0.0049}_{-0.0049}$
$A_{217}^{\text{dust}TT}$	82.6	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8781	$1.879^{+0.025}_{-0.025}$	$f\sigma_8(0.57)$	0.4945	$0.491^{+0.020}_{-0.021}$
$A_{100}^{\text{dust}EE}$	0.0814	$0.081^{+0.011}_{-0.011}$	$D_{40}$	1245.0	$1246^{+28}_{-27}$	$\sigma_8(0.57)$	0.6342	$0.629^{+0.028}_{-0.029}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0492	$0.0489^{+0.0097}_{-0.0098}$	$D_{220}$	5728	$5729^{+77}_{-77}$	$f_{2000}^{143}$	27.4	$29^{+6}_{-5}$
$A_{100 \times 217}^{\text{dust}EE}$	0.098	$0.0995^{+0.064}_{-0.063}$	$D_{810}$	2534.4	$2534^{+27}_{-28}$	$f_{2000}^{143 \times 217}$	30.90	$31^{+4}_{-4}$
$A_{143}^{\text{dust}EE}$	0.1008	$0.100^{+0.013}_{-0.013}$	$D_{1420}$	815.7	$814.6^{+9.7}_{-9.5}$	$f_{2000}^{217}$	104.37	$105.1^{+3.9}_{-3.8}$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.224^{+0.090}_{-0.092}$	$D_{2000}$	231.58	$230.9^{+3.4}_{-3.3}$	$\chi_{\text{lowl}}^2$	15.48	$15.7 (\nu: 1.1)$
$A_{217}^{\text{dust}EE}$	0.648	$0.65^{+0.26}_{-0.26}$	$n_{s,0.002}$	0.9690	$0.967^{+0.011}_{-0.010}$	$\chi_{\text{plik}}^2$	2429.9	$2449.4 (\nu: 22.8)$
$A_{100}^{\text{dust}TE}$	0.139	$0.140^{+0.076}_{-0.074}$	$Y_P$	0.245393	$0.24537^{+0.00015}_{-0.00015}$	$\chi_{\text{prior}}^2$	6.5	$19.2 (\nu: 15.2)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.057}_{-0.057}$	$Y_P^{\text{BBN}}$	0.246720	$0.24669^{+0.00015}_{-0.00015}$	$\chi_{\text{CMB}}^2$	2445.4	$2465.1 (\nu: 22.4)$

Best-fit  $\chi_{\text{eff}}^2 = 2451.89$ ;  $\bar{\chi}_{\text{eff}}^2 = 2484.29$ ;  $R - 1 = 0.00632$

$\chi_{\text{eff}}^2$ : CMB - commander\_rc2\_v1.1\_l2\_29\_B: 15.48 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2429.87



## 2.40 base\_plikHM\_TTTEEE\_lowl\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022343	$0.02234^{+0.00029}_{-0.00029}$	$A_{143 \times 217}^{\text{dustTE}}$	0.337	$0.34^{+0.16}_{-0.15}$	$100\theta_*$	1.04106	$1.04107^{+0.00059}_{-0.00057}$
$\Omega_c h^2$	0.11879	$0.1189^{+0.0022}_{-0.0022}$	$A_{217}^{\text{dustTE}}$	1.67	$1.66^{+0.51}_{-0.51}$	$D_A/\text{Gpc}$	13.9054	$13.904^{+0.047}_{-0.047}$
$100\theta_{\text{MC}}$	1.04088	$1.04089^{+0.00060}_{-0.00058}$	$c_{100}$	0.99823	$0.9982^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.78	$1059.78^{+0.61}_{-0.61}$
$\tau$	0.1040	$0.102^{+0.043}_{-0.046}$	$c_{217}$	0.99582	$0.9958^{+0.0029}_{-0.0028}$	$r_{\text{drag}}$	147.44	$147.43^{+0.51}_{-0.51}$
$\ln(10^{10} A_s)$	3.140	$3.137^{+0.084}_{-0.090}$	$H_0$	67.74	$67.7^{+1.0}_{-0.98}$	$k_D$	0.14048	$0.14048^{+0.00058}_{-0.00059}$
$n_s$	0.9683	$0.9677^{+0.0086}_{-0.0084}$	$\Omega_\Lambda$	0.6910	$0.691^{+0.013}_{-0.014}$	$100\theta_D$	0.160828	$0.16083^{+0.00035}_{-0.00034}$
$y_{\text{cal}}$	1.0001	$1.0003^{+0.0050}_{-0.0050}$	$\Omega_m$	0.3090	$0.309^{+0.014}_{-0.013}$	$z_{\text{eq}}$	3373	$3374^{+50}_{-49}$
$A_{217}^{\text{CIB}}$	64.2	$63^{+10}_{-10}$	$\Omega_m h^2$	0.14178	$0.1418^{+0.0021}_{-0.0021}$	$k_{\text{eq}}$	0.010294	$0.01030^{+0.00015}_{-0.00015}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.26	—	$\Omega_m h^3$	0.09604	$0.09605^{+0.00059}_{-0.00059}$	$100\theta_{\text{eq}}$	0.8185	$0.8183^{+0.0096}_{-0.0094}$
$A_{143}^{\text{tSZ}}$	7.17	$5.5^{+3.8}_{-3.7}$	$\sigma_8$	0.8478	$0.847^{+0.035}_{-0.037}$	$100\theta_{s,\text{eq}}$	0.45211	$0.4520^{+0.0049}_{-0.0048}$
$A_{100}^{\text{PS}}$	250	$257^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4713	$0.471^{+0.020}_{-0.021}$	$r_{\text{drag}}/D_V(0.57)$	0.07171	$0.07169^{+0.00076}_{-0.00074}$
$A_{143}^{\text{PS}}$	39.8	$42^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6321	$0.631^{+0.025}_{-0.027}$	$H(0.57)$	93.060	$93.05^{+0.46}_{-0.45}$
$A_{143 \times 217}^{\text{PS}}$	38.7	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0301	$1.029^{+0.041}_{-0.043}$	$D_A(0.57)$	1385.8	$1386^{+13}_{-14}$
$A_{217}^{\text{PS}}$	100.5	$98^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.546	$2.544^{+0.096}_{-0.10}$	$F_{\text{AP}}(0.57)$	0.67539	$0.6755^{+0.0034}_{-0.0034}$
$A^{\text{kSZ}}$	0.01	$< 7.33$	$z_{\text{re}}$	12.18	$12.0^{+3.7}_{-3.9}$	$f\sigma_8(0.57)$	0.4923	$0.492^{+0.020}_{-0.021}$
$A_{100}^{\text{dustTT}}$	7.36	$7.4^{+3.7}_{-3.7}$	$10^9 A_s$	2.311	$2.31^{+0.20}_{-0.20}$	$\sigma_8(0.57)$	0.6314	$0.630^{+0.027}_{-0.028}$
$A_{143}^{\text{dustTT}}$	8.97	$8.8^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8765	$1.877^{+0.023}_{-0.023}$	$f_{2000}^{143}$	27.9	$28^{+5}_{-5}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$16.8^{+8.2}_{-8.0}$	$D_{40}$	1243.5	$1246^{+27}_{-26}$	$f_{2000}^{143 \times 217}$	31.10	$31^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	82.3	$82^{+10}_{-10}$	$D_{220}$	5725	$5729^{+77}_{-77}$	$f_{2000}^{217}$	104.82	$105.0^{+3.8}_{-3.7}$
$A_{100}^{\text{dustEE}}$	0.0816	$0.081^{+0.011}_{-0.011}$	$D_{810}$	2532.3	$2533^{+27}_{-28}$	$\chi_{\text{lowl}}^2$	15.35	$15.6 (\nu: 1.1)$
$A_{100 \times 143}^{\text{dustEE}}$	0.0492	$0.0490^{+0.0098}_{-0.0096}$	$D_{1420}$	814.7	$814.6^{+9.6}_{-9.5}$	$\chi_{\text{plik}}^2$	2429.9	$2449.0 (\nu: 22.3)$
$A_{100 \times 217}^{\text{dustEE}}$	0.100	$0.0995^{+0.065}_{-0.065}$	$D_{2000}$	231.09	$231.0^{+3.2}_{-3.3}$	$\chi_{6\text{DF}}^2$	0.015	$0.050 (\nu: 0.0)$
$A_{143}^{\text{dustEE}}$	0.1004	$0.100^{+0.013}_{-0.013}$	$n_{s,0.002}$	0.9683	$0.9677^{+0.0086}_{-0.0084}$	$\chi_{\text{MGS}}^2$	1.34	$1.39 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dustEE}}$	0.222	$0.224^{+0.090}_{-0.091}$	$Y_{\text{P}}$	0.245381	$0.24538^{+0.00013}_{-0.00013}$	$\chi_{\text{DR11CMass}}^2$	2.43	$2.80 (\nu: 0.1)$
$A_{217}^{\text{dustEE}}$	0.655	$0.65^{+0.25}_{-0.25}$	$Y_{\text{P}}^{\text{BBN}}$	0.246707	$0.24670^{+0.00013}_{-0.00013}$	$\chi_{\text{DR11LOWZ}}^2$	0.55	$0.68 (\nu: 0.1)$
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.076}_{-0.073}$	$10^5 \text{D}/\text{H}$	2.596	$2.597^{+0.055}_{-0.053}$	$\chi_{\text{prior}}^2$	6.9	$19.2 (\nu: 15.2)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.057}_{-0.058}$	$\text{Age}/\text{Gyr}$	13.7964	$13.797^{+0.044}_{-0.044}$	$\chi_{\text{BAO}}^2$	4.33	$4.91 (\nu: 0.3)$
$A_{100 \times 217}^{\text{dustTE}}$	0.301	$0.30^{+0.17}_{-0.17}$	$z_*$	1089.847	$1089.86^{+0.49}_{-0.49}$	$\chi_{\text{CMB}}^2$	2445.2	$2464.6 (\nu: 21.9)$
$A_{143}^{\text{dustTE}}$	0.153	$0.15^{+0.11}_{-0.10}$	$r_*$	144.76	$144.75^{+0.50}_{-0.50}$			

Best-fit  $\chi_{\text{eff}}^2 = 2456.44$ ;  $\bar{\chi}_{\text{eff}}^2 = 2488.74$ ;  $R - 1 = 0.01004$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.34 DR11CMass: 2.43 DR11LOWZ: 0.55 CMB - commander\_rc2\_v1.1\_l2\_29\_B: 15.35 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2429.89

## 2.41 base\_plikHM\_TTTEEE\_lowl\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022384	$0.02236^{+0.00029}_{-0.00028}$	$A_{217}^{\text{dust}TE}$	1.67	$1.66^{+0.51}_{-0.51}$	$z_{\text{drag}}$	1059.86	$1059.81^{+0.64}_{-0.60}$
$\Omega_c h^2$	0.11854	$0.1186^{+0.0021}_{-0.0022}$	$c_{100}$	0.99825	$0.9982^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.46	$147.47^{+0.51}_{-0.50}$
$100\theta_{\text{MC}}$	1.04093	$1.04091^{+0.00059}_{-0.00057}$	$c_{217}$	0.99574	$0.9958^{+0.0029}_{-0.0028}$	$k_D$	0.14049	$0.14046^{+0.00059}_{-0.00058}$
$\tau$	0.1080	$0.104^{+0.043}_{-0.045}$	$H_0$	67.88	$67.82^{+0.97}_{-0.97}$	$100\theta_D$	0.160787	$0.16082^{+0.00035}_{-0.00035}$
$\ln(10^{10} A_s)$	3.148	$3.140^{+0.083}_{-0.090}$	$\Omega_\Lambda$	0.6928	$0.692^{+0.013}_{-0.013}$	$z_{\text{eq}}$	3367.7	$3369^{+49}_{-49}$
$n_s$	0.9692	$0.9683^{+0.0087}_{-0.0084}$	$\Omega_m$	0.3072	$0.308^{+0.013}_{-0.013}$	$k_{\text{eq}}$	0.010279	$0.01028^{+0.00015}_{-0.00015}$
$y_{\text{cal}}$	1.0001	$1.0003^{+0.0050}_{-0.0050}$	$\Omega_m h^2$	0.14157	$0.1416^{+0.0020}_{-0.0020}$	$100\theta_{\text{eq}}$	0.8196	$0.8192^{+0.0094}_{-0.0092}$
$A_{217}^{\text{CIB}}$	63.3	$63^{+10}_{-10}$	$\Omega_m h^3$	0.09610	$0.09606^{+0.00059}_{-0.00059}$	$100\theta_{s,\text{eq}}$	0.45264	$0.4525^{+0.0048}_{-0.0047}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.40	—	$\sigma_8$	0.8503	$0.847^{+0.035}_{-0.036}$	$r_{\text{drag}}/D_V(0.57)$	0.07180	$0.07177^{+0.00073}_{-0.00073}$
$A_{143}^{\text{tSZ}}$	6.97	$5.5^{+3.8}_{-3.7}$	$\sigma_8 \Omega_m^{0.5}$	0.4713	$0.470^{+0.020}_{-0.021}$	$H(0.57)$	93.131	$93.10^{+0.45}_{-0.44}$
$A_{100}^{\text{PS}}$	250	$256^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6331	$0.631^{+0.025}_{-0.027}$	$D_A(0.57)$	1383.9	$1385^{+13}_{-13}$
$A_{143}^{\text{PS}}$	42.1	$42^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0321	$1.029^{+0.041}_{-0.043}$	$F_{\text{AP}}(0.57)$	0.67494	$0.6751^{+0.0033}_{-0.0033}$
$A_{143 \times 217}^{\text{PS}}$	42.9	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.551	$2.545^{+0.096}_{-0.10}$	$f\sigma_8(0.57)$	0.4933	$0.492^{+0.020}_{-0.021}$
$A_{217}^{\text{PS}}$	102.0	$98^{+20}_{-20}$	$z_{\text{re}}$	12.48	$12.1^{+3.6}_{-3.9}$	$\sigma_8(0.57)$	0.6337	$0.631^{+0.027}_{-0.028}$
$A^{\text{kSZ}}$	0.00	$< 7.27$	$10^9 A_s$	2.328	$2.31^{+0.20}_{-0.20}$	$f_{2000}^{143}$	27.6	$28^{+5}_{-5}$
$A_{100}^{\text{dust}TT}$	7.34	$7.4^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8761	$1.876^{+0.023}_{-0.023}$	$f_{2000}^{143 \times 217}$	30.92	$31^{+4}_{-4}$
$A_{143}^{\text{dust}TT}$	8.85	$8.8^{+3.7}_{-3.6}$	$D_{40}$	1244.3	$1245^{+28}_{-26}$	$f_{2000}^{217}$	104.52	$104.9^{+3.8}_{-3.8}$
$A_{143 \times 217}^{\text{dust}TT}$	17.5	$16.8^{+8.2}_{-8.0}$	$D_{220}$	5729	$5730^{+77}_{-77}$	$\chi_{\text{lowl}}^2$	15.45	$15.6 (\nu: 1.1)$
$A_{217}^{\text{dust}TT}$	81.9	$82^{+10}_{-10}$	$D_{810}$	2532.9	$2533^{+27}_{-28}$	$\chi_{\text{plik}}^2$	2430.0	$2449.0 (\nu: 22.4)$
$A_{100}^{\text{dust}EE}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	815.2	$814.8^{+9.6}_{-9.5}$	$\chi_{\text{H070p6}}^2$	0.669	$0.72 (\nu: 0.0)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0492	$0.0491^{+0.0098}_{-0.0096}$	$D_{2000}$	231.39	$231.1^{+3.3}_{-3.2}$	$\chi_{\text{JLA}}^2$	706.639	$706.69 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.100	$0.099^{+0.065}_{-0.065}$	$n_{s,0.002}$	0.9692	$0.9683^{+0.0087}_{-0.0084}$	$\chi_{6\text{DF}}^2$	0.006	$0.040 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1005	$0.100^{+0.013}_{-0.013}$	$Y_P$	0.245399	$0.24539^{+0.00013}_{-0.00013}$	$\chi_{\text{MGS}}^2$	1.47	$1.49 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.225	$0.224^{+0.090}_{-0.091}$	$Y_P^{\text{BBN}}$	0.246725	$0.24671^{+0.00013}_{-0.00013}$	$\chi_{\text{DR11CMass}}^2$	2.41	$2.75 (\nu: 0.1)$
$A_{217}^{\text{dust}EE}$	0.648	$0.65^{+0.25}_{-0.25}$	$10^5 D/H$	2.589	$2.594^{+0.054}_{-0.054}$	$\chi_{\text{DR11LOWZ}}^2$	0.43	$0.57 (\nu: 0.1)$
$A_{100}^{\text{dust}TE}$	0.140	$0.141^{+0.076}_{-0.073}$	$\text{Age/Gyr}$	13.7895	$13.793^{+0.043}_{-0.043}$	$\chi_{\text{prior}}^2$	6.6	$19.2 (\nu: 15.2)$
$A_{100 \times 143}^{\text{dust}TE}$	0.130	$0.131^{+0.057}_{-0.058}$	$z_*$	1089.774	$1089.82^{+0.47}_{-0.47}$	$\chi_{\text{BAO}}^2$	4.32	$4.85 (\nu: 0.3)$
$A_{100 \times 217}^{\text{dust}TE}$	0.299	$0.30^{+0.17}_{-0.17}$	$r_*$	144.798	$144.79^{+0.50}_{-0.49}$	$\chi_{\text{CMB}}^2$	2445.4	$2464.6 (\nu: 22.0)$
$A_{143}^{\text{dust}TE}$	0.153	$0.15^{+0.11}_{-0.10}$	$100\theta_*$	1.04112	$1.04110^{+0.00059}_{-0.00057}$			
$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.33^{+0.15}_{-0.16}$	$D_A/\text{Gpc}$	13.9079	$13.908^{+0.047}_{-0.047}$			

Best-fit  $\chi_{\text{eff}}^2 = 3163.67$ ;  $\bar{\chi}_{\text{eff}}^2 = 3196.11$ ;  $R - 1 = 0.01055$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMass: 2.41 DR11LOWZ: 0.43 CMB - commander\_rc2.v1.1.l2\_29\_B: 15.45 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2429.95 Hubble -

## 2.42 base\_plikHM\_TTTEEE\_lowl\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00033}_{-0.00034}$	$A_{100 \times 217}^{\text{dust}TE}$	$0.30^{+0.16}_{-0.17}$	$10^5 D/H$	$2.601^{+0.064}_{-0.062}$
$\Omega_c h^2$	$0.1191^{+0.0031}_{-0.0031}$	$A_{143}^{\text{dust}TE}$	$0.15^{+0.11}_{-0.11}$	Age/Gyr	$13.801^{+0.056}_{-0.056}$
$100\theta_{MC}$	$1.04085^{+0.00065}_{-0.00065}$	$A_{143 \times 217}^{\text{dust}TE}$	$0.34^{+0.16}_{-0.16}$	$z_*$	$1089.91^{+0.63}_{-0.62}$
$\tau$	$0.100^{+0.047}_{-0.047}$	$A_{217}^{\text{dust}TE}$	$1.66^{+0.50}_{-0.51}$	$r_*$	$144.70^{+0.68}_{-0.66}$
$\ln(10^{10} A_s)$	$3.134^{+0.089}_{-0.090}$	$c_{100}$	$0.9982^{+0.0015}_{-0.0015}$	$100\theta_*$	$1.04104^{+0.00064}_{-0.00063}$
$n_s$	$0.967^{+0.011}_{-0.010}$	$c_{217}$	$0.9959^{+0.0028}_{-0.0028}$	$D_A/\text{Gpc}$	$13.899^{+0.063}_{-0.061}$
$y_{cal}$	$1.0003^{+0.0050}_{-0.0050}$	$H_0$	$67.6^{+1.4}_{-1.4}$	$z_{\text{drag}}$	$1059.76^{+0.63}_{-0.66}$
$A_{217}^{\text{CIB}}$	$63^{+10}_{-10}$	$\Omega_\Lambda$	$0.689^{+0.019}_{-0.020}$	$r_{\text{drag}}$	$147.38^{+0.66}_{-0.65}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\Omega_m$	$0.311^{+0.020}_{-0.019}$	$k_D$	$0.14052^{+0.00068}_{-0.00066}$
$A_{143}^{\text{tSZ}}$	$5.5^{+3.6}_{-3.8}$	$\Omega_m h^2$	$0.1421^{+0.0029}_{-0.0029}$	$100\theta_D$	$0.16085^{+0.00037}_{-0.00036}$
$A_{100}^{\text{PS}}$	$257^{+50}_{-50}$	$\Omega_m h^3$	$0.09604^{+0.00059}_{-0.00059}$	$z_{\text{eq}}$	$3380^{+69}_{-70}$
$A_{143}^{\text{PS}}$	$42^{+20}_{-20}$	$\sigma_8$	$0.846^{+0.035}_{-0.034}$	$k_{\text{eq}}$	$0.01032^{+0.00021}_{-0.00021}$
$A_{143 \times 217}^{\text{PS}}$	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	$0.472^{+0.021}_{-0.021}$	$100\theta_{\text{eq}}$	$0.817^{+0.014}_{-0.013}$
$A_{217}^{\text{PS}}$	$98^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	$0.632^{+0.025}_{-0.025}$	$100\theta_{s,\text{eq}}$	$0.4514^{+0.0070}_{-0.0067}$
$A^{\text{kSZ}}$	$< 7.36$	$\sigma_8/h^{0.5}$	$1.029^{+0.040}_{-0.040}$	$r_{\text{drag}}/D_V(0.57)$	$0.0716^{+0.0011}_{-0.0010}$
$A_{100}^{\text{dust}TT}$	$7.4^{+3.7}_{-3.6}$	$\langle d^2 \rangle^{1/2}$	$2.545^{+0.094}_{-0.095}$	$H(0.57)$	$93.01^{+0.62}_{-0.60}$
$A_{143}^{\text{dust}TT}$	$8.8^{+3.7}_{-3.7}$	$z_{\text{re}}$	$11.8^{+3.6}_{-4.1}$	$D_A(0.57)$	$1388^{+19}_{-19}$
$A_{143 \times 217}^{\text{dust}TT}$	$16.8^{+8.3}_{-8.0}$	$10^9 A_s$	$2.30^{+0.20}_{-0.21}$	$F_{\text{AP}}(0.57)$	$0.6759^{+0.0049}_{-0.0048}$
$A_{217}^{\text{dust}TT}$	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.025}_{-0.025}$	$f\sigma_8(0.57)$	$0.492^{+0.019}_{-0.019}$
$A_{100}^{\text{dust}EE}$	$0.081^{+0.011}_{-0.011}$	$D_{40}$	$1246^{+27}_{-27}$	$\sigma_8(0.57)$	$0.630^{+0.028}_{-0.027}$
$A_{100 \times 143}^{\text{dust}EE}$	$0.0489^{+0.0099}_{-0.0098}$	$D_{220}$	$5729^{+78}_{-77}$	$f_{2000}^{143}$	$29^{+5}_{-5}$
$A_{100 \times 217}^{\text{dust}EE}$	$0.0995^{+0.064}_{-0.064}$	$D_{810}$	$2533^{+27}_{-28}$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4}$
$A_{143}^{\text{dust}EE}$	$0.100^{+0.013}_{-0.013}$	$D_{1420}$	$814.6^{+9.6}_{-9.4}$	$f_{2000}^{217}$	$105.1^{+3.9}_{-3.8}$
$A_{143 \times 217}^{\text{dust}EE}$	$0.224^{+0.090}_{-0.093}$	$D_{2000}$	$230.9^{+3.4}_{-3.3}$	$\chi_{\text{lowl}}^2$	$15.7 (\nu: 1.1)$
$A_{217}^{\text{dust}EE}$	$0.65^{+0.25}_{-0.25}$	$n_{s,0.002}$	$0.967^{+0.011}_{-0.010}$	$\chi_{\text{plik}}^2$	$2449.4 (\nu: 22.4)$
$A_{100}^{\text{dust}TE}$	$0.141^{+0.076}_{-0.073}$	$Y_P$	$0.24537^{+0.00015}_{-0.00016}$	$\chi_{\text{prior}}^2$	$19.2 (\nu: 15.3)$
$A_{100 \times 143}^{\text{dust}TE}$	$0.131^{+0.057}_{-0.058}$	$Y_{\text{BBN}}$	$0.24670^{+0.00015}_{-0.00016}$	$\chi_{\text{CMB}}^2$	$2465.1 (\nu: 22.2)$

$$\bar{\chi}_{\text{eff}}^2 = 2484.26; R - 1 = 0.00864$$

## 2.43 base\_plikHM\_TTTEEE\_lowl\_post\_BAO\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00029}_{-0.00028}$	$A_{143 \times 217}^{\text{dust}TE}$	$0.33^{+0.16}_{-0.15}$	$100\theta_*$	$1.04107^{+0.00059}_{-0.00057}$
$\Omega_c h^2$	$0.1188^{+0.0022}_{-0.0022}$	$A_{217}^{\text{dust}TE}$	$1.66^{+0.51}_{-0.51}$	$D_A/\text{Gpc}$	$13.904^{+0.047}_{-0.047}$
$100\theta_{\text{MC}}$	$1.04089^{+0.00060}_{-0.00058}$	$c_{100}$	$0.9982^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	$1059.78^{+0.61}_{-0.61}$
$\tau$	$0.103^{+0.043}_{-0.044}$	$c_{217}$	$0.9958^{+0.0029}_{-0.0028}$	$r_{\text{drag}}$	$147.43^{+0.51}_{-0.51}$
$\ln(10^{10} A_s)$	$3.138^{+0.083}_{-0.086}$	$H_0$	$67.7^{+1.0}_{-0.99}$	$k_D$	$0.14048^{+0.00059}_{-0.00059}$
$n_s$	$0.9678^{+0.0086}_{-0.0084}$	$\Omega_\Lambda$	$0.691^{+0.013}_{-0.014}$	$100\theta_D$	$0.16083^{+0.00035}_{-0.00034}$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0050}$	$\Omega_m$	$0.309^{+0.014}_{-0.013}$	$z_{\text{eq}}$	$3374^{+50}_{-49}$
$A_{217}^{\text{CIB}}$	$63^{+10}_{-10}$	$\Omega_m h^2$	$0.1418^{+0.0021}_{-0.0021}$	$k_{\text{eq}}$	$0.01030^{+0.00015}_{-0.00015}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\Omega_m h^3$	$0.09605^{+0.00059}_{-0.00059}$	$100\theta_{\text{eq}}$	$0.8183^{+0.0096}_{-0.0094}$
$A_{143}^{\text{tSZ}}$	$5.5^{+3.8}_{-3.7}$	$\sigma_8$	$0.847^{+0.035}_{-0.035}$	$100\theta_{s,\text{eq}}$	$0.4520^{+0.0049}_{-0.0048}$
$A_{100}^{\text{PS}}$	$257^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	$0.471^{+0.019}_{-0.020}$	$r_{\text{drag}}/D_V(0.57)$	$0.07170^{+0.00076}_{-0.00074}$
$A_{143}^{\text{PS}}$	$42^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	$0.632^{+0.025}_{-0.026}$	$H(0.57)$	$93.06^{+0.45}_{-0.45}$
$A_{143 \times 217}^{\text{PS}}$	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	$1.029^{+0.041}_{-0.042}$	$D_A(0.57)$	$1386^{+13}_{-13}$
$A_{217}^{\text{PS}}$	$98^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	$2.545^{+0.095}_{-0.098}$	$F_{\text{AP}}(0.57)$	$0.6755^{+0.0034}_{-0.0034}$
$A^{\text{kSZ}}$	$< 7.32$	$z_{\text{re}}$	$12.0^{+3.3}_{-3.9}$	$f\sigma_8(0.57)$	$0.492^{+0.019}_{-0.020}$
$A_{100}^{\text{dust}TT}$	$7.4^{+3.7}_{-3.7}$	$10^9 A_s$	$2.31^{+0.20}_{-0.19}$	$\sigma_8(0.57)$	$0.631^{+0.027}_{-0.027}$
$A_{143}^{\text{dust}TT}$	$8.8^{+3.7}_{-3.6}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.023}_{-0.023}$	$f_{2000}^{143}$	$28^{+5}_{-5}$
$A_{143 \times 217}^{\text{dust}TT}$	$16.8^{+8.2}_{-8.0}$	$D_{40}$	$1246^{+27}_{-26}$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4}$
$A_{217}^{\text{dust}TT}$	$82^{+10}_{-10}$	$D_{220}$	$5729^{+77}_{-77}$	$f_{2000}^{217}$	$105.0^{+3.8}_{-3.7}$
$A_{100}^{\text{dust}EE}$	$0.081^{+0.011}_{-0.011}$	$D_{810}$	$2533^{+27}_{-28}$	$\chi_{\text{lowl}}^2$	$15.6 (\nu: 1.1)$
$A_{100 \times 143}^{\text{dust}EE}$	$0.0490^{+0.0098}_{-0.0096}$	$D_{1420}$	$814.6^{+9.6}_{-9.5}$	$\chi_{\text{plik}}^2$	$2448.9 (\nu: 21.9)$
$A_{100 \times 217}^{\text{dust}EE}$	$0.0996^{+0.065}_{-0.065}$	$D_{2000}$	$231.0^{+3.2}_{-3.3}$	$\chi_{6\text{DF}}^2$	$0.049 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	$0.100^{+0.013}_{-0.013}$	$n_{s,0.002}$	$0.9678^{+0.0086}_{-0.0084}$	$\chi_{\text{MGS}}^2$	$1.39 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	$0.224^{+0.090}_{-0.091}$	$Y_{\text{P}}$	$0.24538^{+0.00013}_{-0.00013}$	$\chi_{\text{DR11CMass}}^2$	$2.79 (\nu: 0.1)$
$A_{217}^{\text{dust}EE}$	$0.65^{+0.25}_{-0.25}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24670^{+0.00013}_{-0.00013}$	$\chi_{\text{DR11LOWZ}}^2$	$0.67 (\nu: 0.1)$
$A_{100}^{\text{dust}TE}$	$0.141^{+0.076}_{-0.073}$	$10^5 \text{D/H}$	$2.597^{+0.054}_{-0.053}$	$\chi_{\text{prior}}^2$	$19.2 (\nu: 15.2)$
$A_{100 \times 143}^{\text{dust}TE}$	$0.131^{+0.057}_{-0.058}$	$\text{Age/Gyr}$	$13.797^{+0.043}_{-0.044}$	$\chi_{\text{BAO}}^2$	$4.91 (\nu: 0.3)$
$A_{100 \times 217}^{\text{dust}TE}$	$0.30^{+0.17}_{-0.17}$	$z_*$	$1089.86^{+0.49}_{-0.48}$	$\chi_{\text{CMB}}^2$	$2464.6 (\nu: 21.7)$
$A_{143}^{\text{dust}TE}$	$0.15^{+0.11}_{-0.10}$	$r_*$	$144.75^{+0.50}_{-0.50}$		

$$\bar{\chi}_{\text{eff}}^2 = 2488.68; R - 1 = 0.00998$$

## 2.44 base\_CamSpecHM\_TT\_lowl

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02244	$0.02243^{+0.00053}_{-0.00054}$ (+0.1 $\sigma$ )	$H_0$	68.35	$68.3^{+2.3}_{-2.3}$ (+0.1 $\sigma$ )	$100\theta_*$	1.04138	$1.0414^{+0.0010}_{-0.0010}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	0.1176	$0.1177^{+0.0051}_{-0.0050}$ (-0.1 $\sigma$ )	$\Omega_\Lambda$	0.6989	$0.698^{+0.031}_{-0.032}$ (+0.1 $\sigma$ )	$z_{\text{drag}}$	1059.89	$1059.9^{+1.0}_{-1.1}$ (+0.0 $\sigma$ )
$100\theta_{\text{MC}}$	1.04118	$1.0412^{+0.0010}_{-0.0010}$ (+0.1 $\sigma$ )	$\Omega_m$	0.3011	$0.302^{+0.032}_{-0.031}$ (-0.1 $\sigma$ )	$r_{\text{drag}}$	147.66	$147.6^{+1.0}_{-1.0}$ (+0.1 $\sigma$ )
$\tau$	0.120	$0.115^{+0.063}_{-0.067}$ (+0.1 $\sigma$ )	$\Omega_m h^2$	0.14067	$0.1408^{+0.0047}_{-0.0047}$ (-0.1 $\sigma$ )	$k_D$	0.14033	$0.1403^{+0.0010}_{-0.0011}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.165	$3.16^{+0.12}_{-0.13}$ (+0.0 $\sigma$ )	$\Omega_m h^3$	0.09615	$0.09614^{+0.00094}_{-0.00094}$ (+0.0 $\sigma$ )	$100\theta_D$	0.16077	$0.16078^{+0.00059}_{-0.00055}$ (-0.1 $\sigma$ )
$n_s$	0.9743	$0.974^{+0.016}_{-0.015}$ (+0.4 $\sigma$ )	$\sigma_8$	0.8559	$0.853^{+0.044}_{-0.046}$ (+0.0 $\sigma$ )	$z_{\text{eq}}$	3346	$3349^{+110}_{-110}$ (-0.1 $\sigma$ )
$y_{\text{cal}}$	0.99972	$1.0002^{+0.0048}_{-0.0049}$ (+0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4697	$0.469^{+0.027}_{-0.026}$ (-0.1 $\sigma$ )	$100\theta_{\text{eq}}$	0.8238	$0.824^{+0.022}_{-0.022}$ (+0.1 $\sigma$ )
$A_{100}^{\text{PS}}$	238.1	$238^{+40}_{-50}$ (-0.5 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6340	$0.632^{+0.030}_{-0.031}$ (-0.0 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07217	$0.0721^{+0.0018}_{-0.0018}$ (+0.2 $\sigma$ )
$A_{143}^{\text{PS}}$	32.8	$36^{+20}_{-20}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	1.035	$1.032^{+0.049}_{-0.051}$ (-0.0 $\sigma$ )	$H(0.57)$	93.33	$93.3^{+1.1}_{-1.0}$ (+0.1 $\sigma$ )
$A_{217}^{\text{PS}}$	100.5	$100^{+30}_{-30}$ (+0.2 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.551	$2.54^{+0.11}_{-0.12}$ (-0.1 $\sigma$ )	$D_A(0.57)$	1377.6	$1378^{+31}_{-31}$ (-0.1 $\sigma$ )
$A_{217}^{\text{CIB}}$	45.8	$44^{+10}_{-10}$ (-2.8 $\sigma$ )	$z_{\text{re}}$	13.4	$12.9^{+5.0}_{-5.5}$ (+0.1 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6734	$0.6736^{+0.0081}_{-0.0077}$ (-0.1 $\sigma$ )
$A_{143}^{\text{tSZ}}$	4.58	$< 7.03$ (-1.0 $\sigma$ )	$10^9 A_s$	2.368	$2.35^{+0.29}_{-0.28}$ (+0.0 $\sigma$ )	$f\sigma_8(0.57)$	0.4948	$0.493^{+0.024}_{-0.025}$ (-0.0 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.462	$0.53^{+0.24}_{-0.22}$	$10^9 A_s e^{-2\tau}$	1.8643	$1.867^{+0.031}_{-0.030}$ (-0.3 $\sigma$ )	$\sigma_8(0.57)$	0.6394	$0.637^{+0.037}_{-0.038}$ (+0.1 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.02	—	$D_{40}$	1233.7	$1235^{+32}_{-31}$ (-0.5 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246332	$0.24633^{+0.00023}_{-0.00023}$ (-3.3 $\sigma$ )
$A^{\text{kSZ}}$	2.5	—	$D_{220}$	5695	$5700^{+81}_{-79}$ (-0.5 $\sigma$ )	$f_{2000}^{143}$	26.6	$27^{+6}_{-7}$ (-0.4 $\sigma$ )
$A_{100}^{\text{dust}}$	0.979	$0.98^{+0.37}_{-0.38}$	$D_{810}$	2523.9	$2527^{+28}_{-28}$ (-0.2 $\sigma$ )	$f_{2000}^{217}$	104.73	$104.9^{+4.6}_{-4.5}$ (+0.1 $\sigma$ )
$A_{143}^{\text{dust}}$	1.028	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	814.2	$815^{+10}_{-10}$ (+0.0 $\sigma$ )	$f_{2000}^{143 \times 217}$	29.8	$30^{+5}_{-5}$ (-0.4 $\sigma$ )
$A_{217}^{\text{dust}}$	1.219	$1.23^{+0.23}_{-0.23}$	$n_{\text{s},0.002}$	0.9743	$0.974^{+0.016}_{-0.015}$ (+0.4 $\sigma$ )	$\chi_{\text{lowl}}^2$	14.70	$14.9 (\nu: 1.4)$ (-0.4 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.969	$0.97^{+0.36}_{-0.35}$	$Y_{\text{P}}$	0.245001	$0.24500^{+0.00023}_{-0.00022}$ (-3.3 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	8043.2	$8058.1 (\nu: 17.0)$
$c_{100}$	0.99672	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	Age/Gyr	13.772	$13.774^{+0.095}_{-0.094}$ (-0.1 $\sigma$ )	$\chi_{\text{CMB}}^2$	8057.9	$8073.0 (\nu: 16.3)$ (+1314.7 $\sigma$ )
$c_{217}$	0.99685	$0.9969^{+0.0035}_{-0.0035}$ (+0.8 $\sigma$ )	$z_*$	1089.61	$1089.6^{+1.0}_{-1.0}$ (-0.2 $\sigma$ )			
$\beta_1^1$	0.02	$-0.1^{+2.0}_{-1.9}$	$r_*$	145.01	$145.0^{+1.1}_{-1.1}$ (+0.1 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 8061.20$ ;  $\Delta\chi_{\text{eff}}^2 = 7283.14$ ;  $\bar{\chi}_{\text{eff}}^2 = 8081.52$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7283.13$ ;  $R - 1 = 0.00567$

$\chi_{\text{eff}}^2$ : CMB - commander\_rc2\_v1.1\_l2\_29\_B: 14.70 ( $\Delta$  -0.69) CamSpec like\_v9.10CMH\_unified: 8043.21

## 2.45 base\_CamSpecHM\_TT\_lowl\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00042}_{-0.00041} (+0.0\sigma)$	$\Omega_m$	$0.306^{+0.016}_{-0.015} (-0.1\sigma)$	$100\theta_D$	$0.16082^{+0.00053}_{-0.00051} (-0.0\sigma)$
$\Omega_c h^2$	$0.1184^{+0.0026}_{-0.0026} (-0.1\sigma)$	$\Omega_m h^2$	$0.1414^{+0.0025}_{-0.0025} (-0.1\sigma)$	$z_{\text{eq}}$	$3365^{+61}_{-59} (-0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04106^{+0.00085}_{-0.00084} (+0.1\sigma)$	$\Omega_m h^3$	$0.09611^{+0.00093}_{-0.00093} (+0.0\sigma)$	$100\theta_{\text{eq}}$	$0.820^{+0.011}_{-0.011} (+0.1\sigma)$
$\tau$	$0.109^{+0.052}_{-0.056} (+0.0\sigma)$	$\sigma_8$	$0.850^{+0.042}_{-0.044} (-0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07187^{+0.00090}_{-0.00089} (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.15^{+0.10}_{-0.11} (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.471^{+0.024}_{-0.025} (-0.0\sigma)$	$H(0.57)$	$93.17^{+0.60}_{-0.58} (+0.1\sigma)$
$n_s$	$0.972^{+0.010}_{-0.010} (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.633^{+0.030}_{-0.032} (-0.0\sigma)$	$D_A(0.57)$	$1383^{+16}_{-16} (-0.1\sigma)$
$y_{\text{cal}}$	$1.0002^{+0.0048}_{-0.0050} (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$1.032^{+0.049}_{-0.051} (-0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.6747^{+0.0040}_{-0.0040} (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$240^{+50}_{-50} (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.54^{+0.11}_{-0.12} (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.493^{+0.023}_{-0.025} (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$36^{+20}_{-20} (-0.6\sigma)$	$z_{\text{re}}$	$12.4^{+4.3}_{-4.6} (+0.0\sigma)$	$\sigma_8(0.57)$	$0.634^{+0.033}_{-0.034} (+0.0\sigma)$
$A_{217}^{\text{PS}}$	$100^{+30}_{-30} (+0.2\sigma)$	$10^9 A_s$	$2.33^{+0.24}_{-0.24} (-0.0\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24630^{+0.00017}_{-0.00018} (-4.4\sigma)$
$A_{217}^{\text{CIB}}$	$44^{+10}_{-10} (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.024}_{-0.024} (-0.3\sigma)$	$f_{2000}^{143}$	$27^{+6}_{-6} (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.95 (-1.0\sigma)$	$D_{40}$	$1236^{+30}_{-30} (-0.5\sigma)$	$f_{2000}^{217}$	$105.2^{+4.3}_{-4.2} (+0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.53^{+0.23}_{-0.22}$	$D_{220}$	$5699^{+80}_{-81} (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+5}_{-5} (-0.3\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2528^{+27}_{-28} (-0.2\sigma)$	$\chi_{\text{lowl}}^2$	$14.8 (\nu: 1.3) (-0.4\sigma)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$815^{+10}_{-9.8} (+0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8057.7 (\nu: 16.6)$
$A_{100}^{\text{dust}}$	$0.98^{+0.38}_{-0.38}$	$n_{\text{s},0.002}$	$0.972^{+0.010}_{-0.010} (+0.4\sigma)$	$\chi_{6\text{DF}}^2$	$0.048 (\nu: 0.0) (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$Y_{\text{P}}$	$0.24497^{+0.00018}_{-0.00017} (-4.5\sigma)$	$\chi_{\text{MGS}}^2$	$1.63 (\nu: 0.2) (+0.1\sigma)$
$A_{217}^{\text{dust}}$	$1.23^{+0.23}_{-0.23}$	$\text{Age/Gyr}$	$13.787^{+0.060}_{-0.061} (-0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.93 (\nu: 0.3) (+0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.36}_{-0.34}$	$z_*$	$1089.77^{+0.65}_{-0.63} (-0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.52 (\nu: 0.1) (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	$r_*$	$144.84^{+0.64}_{-0.64} (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.5 (\nu: 6.4) (+0.4\sigma)$
$c_{217}$	$0.9970^{+0.0034}_{-0.0035} (+0.8\sigma)$	$100\theta_*$	$1.04126^{+0.00084}_{-0.00082} (+0.1\sigma)$	$\chi_{\text{BAO}}^2$	$5.1 (\nu: 0.6) (+0.0\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	$1059.80^{+0.90}_{-0.93} (-0.0\sigma)$	$\chi_{\text{CMB}}^2$	$8072.5 (\nu: 15.8) (+1346.2\sigma)$
$H_0$	$68.0^{+1.2}_{-1.2} (+0.1\sigma)$	$r_{\text{drag}}$	$147.51^{+0.68}_{-0.68} (+0.1\sigma)$		
$\Omega_\Lambda$	$0.694^{+0.015}_{-0.016} (+0.1\sigma)$	$k_{\text{D}}$	$0.14044^{+0.00087}_{-0.00089} (-0.0\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 8086.17; \Delta \bar{\chi}_{\text{eff}}^2 = 7283.45; R - 1 = 0.01003$$

## 2.46 base\_CamSpecHM\_TT\_lowl\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00041}_{-0.00041} (+0.0\sigma)$	$\Omega_m$	$0.305^{+0.015}_{-0.015} (-0.1\sigma)$	$100\theta_D$	$0.16080^{+0.00053}_{-0.00051} (-0.0\sigma)$
$\Omega_c h^2$	$0.1182^{+0.0025}_{-0.0025} (-0.1\sigma)$	$\Omega_m h^2$	$0.1412^{+0.0024}_{-0.0024} (-0.1\sigma)$	$z_{\text{eq}}$	$3359^{+58}_{-57} (-0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04111^{+0.00084}_{-0.00083} (+0.1\sigma)$	$\Omega_m h^3$	$0.09614^{+0.00092}_{-0.00093} (+0.0\sigma)$	$100\theta_{\text{eq}}$	$0.821^{+0.011}_{-0.011} (+0.1\sigma)$
$\tau$	$0.111^{+0.052}_{-0.055} (+0.0\sigma)$	$\sigma_8$	$0.852^{+0.042}_{-0.044} (-0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07197^{+0.00087}_{-0.00086} (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.15^{+0.10}_{-0.11} (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.470^{+0.024}_{-0.024} (-0.0\sigma)$	$H(0.57)$	$93.22^{+0.58}_{-0.56} (+0.1\sigma)$
$n_s$	$0.9726^{+0.0098}_{-0.0097} (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.633^{+0.030}_{-0.032} (-0.0\sigma)$	$D_A(0.57)$	$1381^{+16}_{-16} (-0.1\sigma)$
$y_{\text{cal}}$	$1.0002^{+0.0048}_{-0.0050} (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$1.032^{+0.049}_{-0.052} (-0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.6743^{+0.0039}_{-0.0038} (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$239^{+40}_{-50} (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.54^{+0.11}_{-0.12} (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.493^{+0.023}_{-0.025} (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$36^{+20}_{-20} (-0.6\sigma)$	$z_{\text{re}}$	$12.6^{+4.2}_{-4.5} (+0.0\sigma)$	$\sigma_8(0.57)$	$0.635^{+0.033}_{-0.034} (+0.0\sigma)$
$A_{217}^{\text{PS}}$	$100^{+30}_{-30} (+0.2\sigma)$	$10^9 A_s$	$2.34^{+0.24}_{-0.24} (-0.0\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24631^{+0.00017}_{-0.00018} (-4.5\sigma)$
$A_{217}^{\text{CIB}}$	$44^{+10}_{-10} (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.024}_{-0.024} (-0.3\sigma)$	$f_{2000}^{143}$	$27^{+6}_{-6} (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.97 (-1.0\sigma)$	$D_{40}$	$1236^{+31}_{-30} (-0.5\sigma)$	$f_{2000}^{217}$	$105.1^{+4.3}_{-4.2} (+0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.53^{+0.23}_{-0.22}$	$D_{220}$	$5700^{+80}_{-80} (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+5}_{-5} (-0.3\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2528^{+27}_{-28} (-0.2\sigma)$	$\chi_{\text{lowl}}^2$	$14.8 (\nu: 1.3) (-0.4\sigma)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$815^{+10}_{-9.6} (+0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8057.6 (\nu: 16.5)$
$A_{100}^{\text{dust}}$	$0.98^{+0.38}_{-0.38}$	$n_{\text{s},0.002}$	$0.9726^{+0.0098}_{-0.0097} (+0.4\sigma)$	$\chi_{\text{H070p6}}^2$	$0.61 (\nu: 0.0) (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$Y_{\text{P}}$	$0.24498^{+0.00018}_{-0.00017} (-4.5\sigma)$	$\chi_{\text{JLA}}^2$	$706.64 (\nu: 0.0) (-0.1\sigma)$
$A_{217}^{\text{dust}}$	$1.23^{+0.23}_{-0.23}$	$\text{Age}/\text{Gyr}$	$13.782^{+0.059}_{-0.060} (-0.1\sigma)$	$\chi_{6\text{DF}}^2$	$0.043 (\nu: 0.0) (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.34}$	$z_*$	$1089.72^{+0.63}_{-0.62} (-0.1\sigma)$	$\chi_{\text{MGS}}^2$	$1.76 (\nu: 0.2) (+0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	$r_*$	$144.89^{+0.62}_{-0.63} (+0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.95 (\nu: 0.3) (+0.0\sigma)$
$c_{217}$	$0.9969^{+0.0034}_{-0.0035} (+0.8\sigma)$	$100\theta_*$	$1.04130^{+0.00082}_{-0.00081} (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.41 (\nu: 0.1) (-0.1\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	$1059.84^{+0.89}_{-0.89} (-0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.5 (\nu: 6.4) (+0.4\sigma)$
$H_0$	$68.1^{+1.2}_{-1.2} (+0.1\sigma)$	$r_{\text{drag}}$	$147.55^{+0.67}_{-0.67} (+0.1\sigma)$	$\chi_{\text{BAO}}^2$	$5.2 (\nu: 0.7) (+0.0\sigma)$
$\Omega_\Lambda$	$0.695^{+0.015}_{-0.015} (+0.1\sigma)$	$k_{\text{D}}$	$0.14041^{+0.00087}_{-0.00089} (-0.0\sigma)$	$\chi_{\text{CMB}}^2$	$8072.4 (\nu: 15.7) (+1346.4\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 8793.35; \Delta \bar{\chi}_{\text{eff}}^2 = 7283.42; R - 1 = 0.00951$$

## 2.47 base\_CamSpecHM\_TT\_lowl\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02243^{+0.00052}_{-0.00053} \quad (+0.1\sigma)$	$H_0$	$68.3^{+2.3}_{-2.3} \quad (+0.1\sigma)$	$100\theta_*$	$1.0414^{+0.0010}_{-0.00099} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1177^{+0.0050}_{-0.0049} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.698^{+0.029}_{-0.031} \quad (+0.1\sigma)$	$z_{\text{drag}}$	$1059.9^{+1.0}_{-1.0} \quad (+0.0\sigma)$
$100\theta_{\text{MC}}$	$1.0412^{+0.0010}_{-0.0010} \quad (+0.1\sigma)$	$\Omega_m$	$0.302^{+0.031}_{-0.029} \quad (-0.1\sigma)$	$r_{\text{drag}}$	$147.7^{+1.0}_{-1.0} \quad (+0.1\sigma)$
$\tau$	$0.116^{+0.061}_{-0.061} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1407^{+0.0046}_{-0.0046} \quad (-0.1\sigma)$	$k_D$	$0.1403^{+0.0010}_{-0.0010} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.16^{+0.11}_{-0.12} \quad (+0.0\sigma)$	$\Omega_m h^3$	$0.09614^{+0.00093}_{-0.00094} \quad (+0.0\sigma)$	$100\theta_D$	$0.16078^{+0.00057}_{-0.00054} \quad (-0.1\sigma)$
$n_s$	$0.974^{+0.016}_{-0.015} \quad (+0.4\sigma)$	$\sigma_8$	$0.854^{+0.043}_{-0.045} \quad (+0.0\sigma)$	$z_{\text{eq}}$	$3348^{+110}_{-110} \quad (-0.1\sigma)$
$y_{\text{cal}}$	$1.0002^{+0.0048}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.469^{+0.027}_{-0.027} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.824^{+0.022}_{-0.021} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$238^{+50}_{-50} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.633^{+0.030}_{-0.030} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0722^{+0.0018}_{-0.0017} \quad (+0.1\sigma)$
$A_{143}^{\text{PS}}$	$36^{+20}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.033^{+0.048}_{-0.048} \quad (-0.0\sigma)$	$H(0.57)$	$93.3^{+1.1}_{-0.99} \quad (+0.1\sigma)$
$A_{217}^{\text{PS}}$	$101^{+30}_{-30} \quad (+0.2\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.54^{+0.11}_{-0.11} \quad (-0.1\sigma)$	$D_A(0.57)$	$1378^{+31}_{-30} \quad (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$44^{+10}_{-10} \quad (-2.8\sigma)$	$z_{\text{re}}$	$13.0^{+4.4}_{-5.1} \quad (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6735^{+0.0079}_{-0.0075} \quad (-0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 7.03 \quad (-1.0\sigma)$	$10^9 A_s$	$2.36^{+0.27}_{-0.28} \quad (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.494^{+0.023}_{-0.023} \quad (-0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.53^{+0.24}_{-0.23}$	$10^9 A_s e^{-2\tau}$	$1.867^{+0.030}_{-0.030} \quad (-0.3\sigma)$	$\sigma_8(0.57)$	$0.638^{+0.035}_{-0.037} \quad (+0.0\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1236^{+32}_{-31} \quad (-0.5\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24633^{+0.00022}_{-0.00023} \quad (-3.4\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5701^{+81}_{-79} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$27^{+6}_{-7} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.38}_{-0.37}$	$D_{810}$	$2527^{+28}_{-28} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$104.9^{+4.5}_{-4.4} \quad (+0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	$815^{+10}_{-10} \quad (+0.0\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+5}_{-5} \quad (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.23^{+0.23}_{-0.23}$	$n_{\text{s},0.002}$	$0.974^{+0.016}_{-0.015} \quad (+0.4\sigma)$	$\chi_{\text{lowl}}^2$	$14.9 \quad (\nu: 1.4) \quad (-0.4\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.34}$	$Y_{\text{P}}$	$0.24500^{+0.00022}_{-0.00022} \quad (-3.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$8058.1 \quad (\nu: 16.2)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$\text{Age/Gyr}$	$13.773^{+0.091}_{-0.093} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.5 \quad (\nu: 6.3) \quad (+0.4\sigma)$
$c_{217}$	$0.9969^{+0.0034}_{-0.0035} \quad (+0.8\sigma)$	$z_*$	$1089.6^{+1.0}_{-0.98} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$8072.9 \quad (\nu: 15.7) \quad (+1343.1\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_*$	$145.0^{+1.1}_{-1.0} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 8081.47; \Delta \bar{\chi}_{\text{eff}}^2 = 7283.36; R - 1 = 0.00654$$



## 2.48 base\_CamSpecHM\_TT\_lowl\_post\_BAO\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00041}_{-0.00041} (+0.0\sigma)$	$\Omega_m$	$0.306^{+0.016}_{-0.015} (-0.1\sigma)$	$100\theta_D$	$0.16082^{+0.00052}_{-0.00051} (-0.0\sigma)$
$\Omega_c h^2$	$0.1184^{+0.0026}_{-0.0026} (-0.1\sigma)$	$\Omega_m h^2$	$0.1414^{+0.0025}_{-0.0025} (-0.1\sigma)$	$z_{\text{eq}}$	$3364^{+60}_{-59} (-0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04107^{+0.00085}_{-0.00084} (+0.1\sigma)$	$\Omega_m h^3$	$0.09612^{+0.00092}_{-0.00092} (+0.0\sigma)$	$100\theta_{\text{eq}}$	$0.820^{+0.011}_{-0.011} (+0.1\sigma)$
$\tau$	$0.109^{+0.051}_{-0.052} (+0.0\sigma)$	$\sigma_8$	$0.851^{+0.042}_{-0.041} (-0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07188^{+0.00090}_{-0.00088} (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.147^{+0.099}_{-0.10} (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.471^{+0.024}_{-0.024} (-0.0\sigma)$	$H(0.57)$	$93.17^{+0.60}_{-0.58} (+0.1\sigma)$
$n_s$	$0.972^{+0.010}_{-0.0099} (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.633^{+0.030}_{-0.030} (-0.0\sigma)$	$D_A(0.57)$	$1383^{+16}_{-16} (-0.1\sigma)$
$y_{\text{cal}}$	$1.0002^{+0.0048}_{-0.0049} (+0.0\sigma)$	$\sigma_8/h^{0.5}$	$1.032^{+0.048}_{-0.049} (-0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.6747^{+0.0040}_{-0.0040} (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$240^{+50}_{-50} (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.54^{+0.11}_{-0.12} (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.493^{+0.023}_{-0.024} (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$36^{+20}_{-20} (-0.6\sigma)$	$z_{\text{re}}$	$12.5^{+3.9}_{-4.5} (+0.0\sigma)$	$\sigma_8(0.57)$	$0.635^{+0.032}_{-0.032} (+0.0\sigma)$
$A_{217}^{\text{PS}}$	$100^{+30}_{-30} (+0.2\sigma)$	$10^9 A_s$	$2.33^{+0.23}_{-0.24} (-0.0\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24630^{+0.00017}_{-0.00018} (-4.5\sigma)$
$A_{217}^{\text{CIB}}$	$44^{+10}_{-10} (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.024}_{-0.024} (-0.3\sigma)$	$f_{2000}^{143}$	$27^{+6}_{-6} (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.96 (-1.0\sigma)$	$D_{40}$	$1236^{+30}_{-29} (-0.5\sigma)$	$f_{2000}^{217}$	$105.2^{+4.2}_{-4.2} (+0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.53^{+0.23}_{-0.22}$	$D_{220}$	$5699^{+80}_{-81} (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+5}_{-5} (-0.3\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2528^{+27}_{-28} (-0.2\sigma)$	$\chi_{\text{lowl}}^2$	$14.9 (\nu: 1.3) (-0.4\sigma)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$815^{+10}_{-9.8} (+0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8057.6 (\nu: 16.3)$
$A_{100}^{\text{dust}}$	$0.98^{+0.38}_{-0.38}$	$n_{\text{s},0.002}$	$0.972^{+0.010}_{-0.0099} (+0.4\sigma)$	$\chi_{6\text{DF}}^2$	$0.048 (\nu: 0.0) (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$Y_{\text{P}}$	$0.24497^{+0.00018}_{-0.00017} (-4.5\sigma)$	$\chi_{\text{MGS}}^2$	$1.64 (\nu: 0.2) (+0.1\sigma)$
$A_{217}^{\text{dust}}$	$1.23^{+0.23}_{-0.23}$	$\text{Age/Gyr}$	$13.786^{+0.059}_{-0.061} (-0.0\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.93 (\nu: 0.3) (+0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.36}_{-0.34}$	$z_*$	$1089.77^{+0.64}_{-0.63} (-0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.51 (\nu: 0.1) (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	$r_*$	$144.84^{+0.64}_{-0.64} (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.5 (\nu: 6.4) (+0.4\sigma)$
$c_{217}$	$0.9970^{+0.0034}_{-0.0035} (+0.8\sigma)$	$100\theta_*$	$1.04126^{+0.00083}_{-0.00082} (+0.1\sigma)$	$\chi_{\text{BAO}}^2$	$5.1 (\nu: 0.6) (+0.0\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	$1059.81^{+0.90}_{-0.90} (-0.0\sigma)$	$\chi_{\text{CMB}}^2$	$8072.5 (\nu: 15.7) (+1357.9\sigma)$
$H_0$	$68.0^{+1.2}_{-1.2} (+0.1\sigma)$	$r_{\text{drag}}$	$147.51^{+0.68}_{-0.68} (+0.1\sigma)$		
$\Omega_\Lambda$	$0.694^{+0.015}_{-0.016} (+0.1\sigma)$	$k_{\text{D}}$	$0.14044^{+0.00087}_{-0.00089} (-0.0\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 8086.11; \Delta \bar{\chi}_{\text{eff}}^2 = 7283.47; R - 1 = 0.01005$$

## 2.49 base\_CamSpecHM\_TTTEEE\_lowl

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022429	$0.02244^{+0.00035}_{-0.00034}$ $(+0.7\sigma)$	$c_{EE}$	1.0003	$1.0003^{+0.0083}_{-0.0083}$	$z_*$	1089.70	$1089.69^{+0.65}_{-0.65}$ $(-0.7\sigma)$
$\Omega_c h^2$	0.11847	$0.1184^{+0.0031}_{-0.0032}$ $(-0.5\sigma)$	$\beta_1^1$	-0.19	$-0.1^{+2.0}_{-2.0}$	$r_*$	144.78	$144.79^{+0.68}_{-0.66}$ $(+0.3\sigma)$
$100\theta_{MC}$	1.04091	$1.04091^{+0.00062}_{-0.00062}$ $(+0.2\sigma)$	$H_0$	67.94	$68.0^{+1.5}_{-1.4}$ $(+0.5\sigma)$	$100\theta_*$	1.04109	$1.04110^{+0.00060}_{-0.00061}$ $(+0.2\sigma)$
$\tau$	0.099	$0.099^{+0.053}_{-0.052}$ $(-0.0\sigma)$	$\Omega_\Lambda$	0.6933	$0.693^{+0.019}_{-0.019}$ $(+0.5\sigma)$	$z_{drag}$	1059.93	$1059.96^{+0.66}_{-0.67}$ $(+0.6\sigma)$
$\ln(10^{10} A_s)$	3.126	$3.13^{+0.10}_{-0.10}$ $(-0.1\sigma)$	$\Omega_m$	0.3067	$0.307^{+0.019}_{-0.019}$ $(-0.5\sigma)$	$r_{drag}$	147.44	$147.44^{+0.65}_{-0.65}$ $(+0.2\sigma)$
$n_s$	0.9702	$0.971^{+0.011}_{-0.010}$ $(+0.7\sigma)$	$\Omega_m h^2$	0.14154	$0.1415^{+0.0029}_{-0.0029}$ $(-0.4\sigma)$	$k_D$	0.14057	$0.14057^{+0.00068}_{-0.00066}$ $(+0.1\sigma)$
$y_{cal}$	0.99974	$1.0001^{+0.0047}_{-0.0048}$ $(-0.1\sigma)$	$\Omega_m h^3$	0.09616	$0.09616^{+0.00059}_{-0.00058}$ $(+0.4\sigma)$	$100\theta_D$	0.160705	$0.16070^{+0.00039}_{-0.00038}$ $(-0.8\sigma)$
$A_{100}^{PS}$	242.1	$240^{+40}_{-40}$ $(-0.6\sigma)$	$\sigma_8$	0.8410	$0.841^{+0.040}_{-0.038}$ $(-0.2\sigma)$	$z_{eq}$	3367	$3366^{+69}_{-70}$ $(-0.4\sigma)$
$A_{143}^{PS}$	33.8	$37^{+20}_{-20}$ $(-0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4657	$0.466^{+0.022}_{-0.022}$ $(-0.6\sigma)$	$100\theta_{eq}$	0.8198	$0.820^{+0.014}_{-0.013}$ $(+0.4\sigma)$
$A_{217}^{PS}$	99.5	$100^{+30}_{-30}$ $(+0.2\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.6258	$0.626^{+0.028}_{-0.027}$ $(-0.4\sigma)$	$r_{drag}/D_V(0.57)$	0.07183	$0.0718^{+0.0011}_{-0.0010}$ $(+0.5\sigma)$
$A_{217}^{CIB}$	46.3	$44^{+10}_{-10}$ $(-2.9\sigma)$	$\sigma_8/h^{0.5}$	1.0203	$1.021^{+0.045}_{-0.044}$ $(-0.4\sigma)$	$H(0.57)$	93.16	$93.18^{+0.65}_{-0.60}$ $(+0.6\sigma)$
$A_{143}^{tSZ}$	4.31	$< 6.92$ $(-1.0\sigma)$	$\langle d^2 \rangle^{1/2}$	2.519	$2.52^{+0.11}_{-0.10}$ $(-0.5\sigma)$	$D_A(0.57)$	1383.1	$1383^{+19}_{-19}$ $(-0.5\sigma)$
$r_{143 \times 217}^{PS}$	0.446	$0.52^{+0.23}_{-0.22}$	$z_{re}$	11.71	$11.6^{+4.4}_{-4.5}$ $(-0.1\sigma)$	$F_{AP}(0.57)$	0.67480	$0.6747^{+0.0049}_{-0.0049}$ $(-0.5\sigma)$
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s$	2.277	$2.28^{+0.24}_{-0.22}$ $(-0.1\sigma)$	$f\sigma_8(0.57)$	0.4877	$0.488^{+0.022}_{-0.021}$ $(-0.4\sigma)$
$A^{kSZ}$	3.1	—	$10^9 A_s e^{-2\tau}$	1.8688	$1.870^{+0.025}_{-0.024}$ $(-0.7\sigma)$	$\sigma_8(0.57)$	0.6268	$0.627^{+0.032}_{-0.030}$ $(-0.1\sigma)$
$A_{100}^{dust}$	0.996	$0.98^{+0.37}_{-0.37}$	$D_{40}$	1232.3	$1233^{+28}_{-27}$ $(-0.9\sigma)$	$Y_P^{BBN}$	0.246329	$0.24633^{+0.00014}_{-0.00015}$ $(-4.8\sigma)$
$A_{143}^{dust}$	1.031	$1.02^{+0.36}_{-0.36}$	$D_{220}$	5706	$5709^{+74}_{-76}$ $(-0.5\sigma)$	$f_{2000}^{143}$	27.5	$27^{+6}_{-6}$ $(-0.5\sigma)$
$A_{217}^{dust}$	1.219	$1.22^{+0.23}_{-0.23}$	$D_{810}$	2525.6	$2528^{+26}_{-26}$ $(-0.4\sigma)$	$f_{2000}^{217}$	105.31	$105.2^{+3.9}_{-4.0}$ $(+0.0\sigma)$
$A_{143 \times 217}^{dust}$	0.978	$0.98^{+0.35}_{-0.35}$	$D_{1420}$	813.9	$814.7^{+9.0}_{-8.9}$ $(+0.0\sigma)$	$f_{2000}^{143 \times 217}$	30.38	$30^{+4}_{-4}$ $(-0.6\sigma)$
$c_{100}$	0.99678	$0.9968^{+0.0019}_{-0.0019}$ $(-1.8\sigma)$	$n_{s,0.002}$	0.9702	$0.971^{+0.011}_{-0.010}$ $(+0.7\sigma)$	$\chi_{lowl}^2$	14.32	$14.5 (\nu: 0.9)$ $(-0.8\sigma)$
$c_{217}$	0.99696	$0.9969^{+0.0035}_{-0.0035}$ $(+0.7\sigma)$	$Y_P$	0.244998	$0.24500^{+0.00015}_{-0.00014}$ $(-4.8\sigma)$	$\chi_{CamSpec}^2$	12935.1	$12951.8 (\nu: 18.3)$
$c_{TE}$	1.0030	$1.0029^{+0.0092}_{-0.0090}$	Age/Gyr	13.786	$13.784^{+0.055}_{-0.057}$ $(-0.6\sigma)$	$\chi_{CMB}^2$	12949.4	$12966.2 (\nu: 17.9)$ $(+1567.8\sigma)$

Best-fit  $\chi_{eff}^2 = 12952.73$ ;  $\Delta\chi_{eff}^2 = 10500.85$ ;  $\bar{\chi}_{eff}^2 = 12975.07$ ;  $\Delta\bar{\chi}_{eff}^2 = 10490.78$ ;  $R - 1 = 0.00621$

$\chi_{eff}^2$ : CMB - commander\_rc2\_v1.1\_l2\_29\_B: 14.32 ( $\Delta$  -1.17) CamSpec like\_v9.10CMH\_unified: 12935.10

## 2.50 base\_CamSpecHM\_TTTEEE\_lowl\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02243^{+0.00030}_{-0.00030} (+0.6\sigma)$	$H_0$	$67.91^{+0.99}_{-0.97} (+0.4\sigma)$	$r_{\text{drag}}$	$147.42^{+0.51}_{-0.51} (-0.0\sigma)$
$\Omega_c h^2$	$0.1185^{+0.0022}_{-0.0022} (-0.3\sigma)$	$\Omega_\Lambda$	$0.693^{+0.013}_{-0.013} (+0.3\sigma)$	$k_D$	$0.14058^{+0.00061}_{-0.00059} (+0.3\sigma)$
$100\theta_{\text{MC}}$	$1.04090^{+0.00056}_{-0.00057} (+0.0\sigma)$	$\Omega_m$	$0.307^{+0.013}_{-0.013} (-0.3\sigma)$	$100\theta_D$	$0.16071^{+0.00037}_{-0.00036} (-0.7\sigma)$
$\tau$	$0.098^{+0.048}_{-0.048} (-0.2\sigma)$	$\Omega_m h^2$	$0.1416^{+0.0021}_{-0.0020} (-0.2\sigma)$	$z_{\text{eq}}$	$3368^{+49}_{-49} (-0.2\sigma)$
$\ln(10^{10} A_s)$	$3.124^{+0.094}_{-0.094} (-0.3\sigma)$	$\Omega_m h^3$	$0.09616^{+0.00058}_{-0.00057} (+0.4\sigma)$	$100\theta_{\text{eq}}$	$0.8195^{+0.0094}_{-0.0093} (+0.3\sigma)$
$n_s$	$0.9705^{+0.0086}_{-0.0088} (+0.6\sigma)$	$\sigma_8$	$0.841^{+0.039}_{-0.037} (-0.3\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07181^{+0.00074}_{-0.00073} (+0.3\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0047}_{-0.0048} (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.466^{+0.021}_{-0.021} (-0.5\sigma)$	$H(0.57)$	$93.16^{+0.46}_{-0.44} (+0.4\sigma)$
$A_{100}^{\text{PS}}$	$240^{+40}_{-40} (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.626^{+0.028}_{-0.027} (-0.4\sigma)$	$D_A(0.57)$	$1383^{+13}_{-13} (-0.4\sigma)$
$A_{143}^{\text{PS}}$	$37^{+10}_{-10} (-0.7\sigma)$	$\sigma_8/h^{0.5}$	$1.020^{+0.046}_{-0.044} (-0.4\sigma)$	$F_{\text{AP}}(0.57)$	$0.6749^{+0.0034}_{-0.0033} (-0.3\sigma)$
$A_{217}^{\text{PS}}$	$100^{+30}_{-30} (+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.52^{+0.11}_{-0.10} (-0.5\sigma)$	$f\sigma_8(0.57)$	$0.488^{+0.022}_{-0.021} (-0.4\sigma)$
$A_{217}^{\text{CIB}}$	$44^{+10}_{-10} (-2.8\sigma)$	$z_{\text{re}}$	$11.5^{+4.1}_{-4.2} (-0.2\sigma)$	$\sigma_8(0.57)$	$0.627^{+0.030}_{-0.029} (-0.3\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.90 (-1.0\sigma)$	$10^9 A_s$	$2.28^{+0.22}_{-0.21} (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24633^{+0.00012}_{-0.00013} (-5.7\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.24}_{-0.22}$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.022}_{-0.022} (-0.6\sigma)$	$f_{2000}^{143}$	$27^{+5}_{-5} (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1233^{+28}_{-26} (-0.9\sigma)$	$f_{2000}^{217}$	$105.2^{+3.7}_{-3.9} (+0.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5708^{+73}_{-76} (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+4}_{-4} (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.37}_{-0.39}$	$D_{810}$	$2528^{+26}_{-26} (-0.4\sigma)$	$\chi_{\text{lowl}}^2$	$14.4 (\nu: 0.9) (-0.8\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.35}$	$D_{1420}$	$814.7^{+9.0}_{-9.0} (+0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$12951.3 (\nu: 17.4)$
$A_{217}^{\text{dust}}$	$1.23^{+0.23}_{-0.23}$	$n_{\text{s},0.002}$	$0.9705^{+0.0086}_{-0.0088} (+0.6\sigma)$	$\chi_{6\text{DF}}^2$	$0.037 (\nu: 0.0) (-0.2\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$Y_{\text{P}}$	$0.24500^{+0.00013}_{-0.00013} (-5.8\sigma)$	$\chi_{\text{MGS}}^2$	$1.54 (\nu: 0.1) (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.8\sigma)$	$\text{Age}/\text{Gyr}$	$13.786^{+0.043}_{-0.044} (-0.5\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.76 (\nu: 0.1) (-0.1\sigma)$
$c_{217}$	$0.9969^{+0.0036}_{-0.0035} (+0.8\sigma)$	$z_*$	$1089.71^{+0.49}_{-0.48} (-0.6\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.53 (\nu: 0.1) (-0.3\sigma)$
$c_{TE}$	$1.0029^{+0.0093}_{-0.0090}$	$r_*$	$144.77^{+0.50}_{-0.50} (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.9 (\nu: 6.3) (-1.9\sigma)$
$c_{EE}$	$1.0003^{+0.0083}_{-0.0082}$	$100\theta_*$	$1.04109^{+0.00055}_{-0.00056} (+0.0\sigma)$	$\chi_{\text{BAO}}^2$	$4.87 (\nu: 0.3) (-0.0\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	$1059.94^{+0.64}_{-0.62} (+0.5\sigma)$	$\chi_{\text{CMB}}^2$	$12965.7 (\nu: 16.9) (+1588.4\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 12979.46; \Delta\bar{\chi}_{\text{eff}}^2 = 10490.72; R - 1 = 0.00953$$

## 2.51 base\_CamSpecHM\_TTTEEE\_lowl\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02244^{+0.00029}_{-0.00029} (+0.6\sigma)$	$\Omega_\Lambda$	$0.694^{+0.012}_{-0.013} (+0.3\sigma)$	$100\theta_D$	$0.16069^{+0.00037}_{-0.00036} (-0.7\sigma)$
$\Omega_c h^2$	$0.1183^{+0.0021}_{-0.0021} (-0.3\sigma)$	$\Omega_m$	$0.306^{+0.013}_{-0.012} (-0.3\sigma)$	$z_{\text{eq}}$	$3364^{+48}_{-48} (-0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04092^{+0.00055}_{-0.00057} (+0.0\sigma)$	$\Omega_m h^2$	$0.1414^{+0.0020}_{-0.0020} (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.8204^{+0.0091}_{-0.0090} (+0.2\sigma)$
$\tau$	$0.0997^{+0.047}_{-0.048} (-0.2\sigma)$	$\Omega_m h^3$	$0.09617^{+0.00057}_{-0.00057} (+0.4\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07188^{+0.00072}_{-0.00071} (+0.3\sigma)$
$\ln(10^{10} A_s)$	$3.128^{+0.094}_{-0.093} (-0.3\sigma)$	$\sigma_8$	$0.842^{+0.039}_{-0.037} (-0.3\sigma)$	$H(0.57)$	$93.20^{+0.45}_{-0.43} (+0.4\sigma)$
$n_s$	$0.9710^{+0.0085}_{-0.0086} (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.466^{+0.021}_{-0.021} (-0.5\sigma)$	$D_A(0.57)$	$1382^{+13}_{-13} (-0.4\sigma)$
$y_{\text{cal}}$	$1.0000^{+0.0047}_{-0.0048} (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.626^{+0.028}_{-0.027} (-0.4\sigma)$	$F_{\text{AP}}(0.57)$	$0.6746^{+0.0032}_{-0.0032} (-0.3\sigma)$
$A_{100}^{\text{PS}}$	$240^{+40}_{-40} (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.021^{+0.046}_{-0.044} (-0.4\sigma)$	$f\sigma_8(0.57)$	$0.488^{+0.022}_{-0.021} (-0.4\sigma)$
$A_{143}^{\text{PS}}$	$36^{+10}_{-20} (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.52^{+0.11}_{-0.10} (-0.5\sigma)$	$\sigma_8(0.57)$	$0.628^{+0.030}_{-0.029} (-0.3\sigma)$
$A_{217}^{\text{PS}}$	$100^{+30}_{-30} (+0.2\sigma)$	$z_{\text{re}}$	$11.7^{+4.0}_{-4.1} (-0.2\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24633^{+0.00012}_{-0.00013} (-5.8\sigma)$
$A_{217}^{\text{CIB}}$	$44^{+10}_{-10} (-2.8\sigma)$	$10^9 A_s$	$2.28^{+0.22}_{-0.21} (-0.3\sigma)$	$f_{2000}^{143}$	$27^{+5}_{-6} (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.93 (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.022}_{-0.021} (-0.6\sigma)$	$f_{2000}^{217}$	$105.1^{+3.8}_{-3.8} (+0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.24}_{-0.23}$	$D_{40}$	$1233^{+28}_{-26} (-0.9\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+4}_{-4} (-0.5\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5709^{+73}_{-76} (-0.5\sigma)$	$\chi_{\text{lowl}}^2$	$14.4 (\nu: 0.9) (-0.8\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2527^{+26}_{-26} (-0.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$12951.2 (\nu: 17.4)$
$A_{100}^{\text{dust}}$	$0.98^{+0.37}_{-0.39}$	$D_{1420}$	$814.8^{+8.9}_{-8.9} (-0.0\sigma)$	$\chi_{\text{H070p6}}^2$	$0.63 (\nu: 0.0) (-0.3\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.35}$	$n_{\text{s},0.002}$	$0.9710^{+0.0085}_{-0.0086} (+0.6\sigma)$	$\chi_{\text{JLA}}^2$	$706.65 (\nu: 0.0) (-0.3\sigma)$
$A_{217}^{\text{dust}}$	$1.23^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.24501^{+0.00013}_{-0.00013} (-5.9\sigma)$	$\chi_{6\text{DF}}^2$	$0.032 (\nu: 0.0) (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$\text{Age/Gyr}$	$13.783^{+0.042}_{-0.043} (-0.5\sigma)$	$\chi_{\text{MGS}}^2$	$1.63 (\nu: 0.1) (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.8\sigma)$	$z_*$	$1089.67^{+0.48}_{-0.47} (-0.6\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.76 (\nu: 0.1) (+0.0\sigma)$
$c_{217}$	$0.9969^{+0.0036}_{-0.0035} (+0.7\sigma)$	$r_*$	$144.81^{+0.49}_{-0.49} (+0.0\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.45 (\nu: 0.1) (-0.3\sigma)$
$c_{TE}$	$1.0028^{+0.0093}_{-0.0089}$	$100\theta_*$	$1.04111^{+0.00055}_{-0.00056} (+0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.9 (\nu: 6.3) (-1.9\sigma)$
$c_{EE}$	$1.0003^{+0.0083}_{-0.0082}$	$z_{\text{drag}}$	$1059.97^{+0.62}_{-0.59} (+0.5\sigma)$	$\chi_{\text{BAO}}^2$	$4.88 (\nu: 0.3) (+0.0\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_{\text{drag}}$	$147.45^{+0.51}_{-0.51} (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$12965.7 (\nu: 16.9) (+1584.8\sigma)$
$H_0$	$68.00^{+0.97}_{-0.94} (+0.4\sigma)$	$k_D$	$0.14056^{+0.00061}_{-0.00059} (+0.3\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 13686.72; \Delta\bar{\chi}_{\text{eff}}^2 = 10490.61; R - 1 = 0.01030$$

## 2.52 base\_CamSpecHM\_TTTEEE\_lowl\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02244^{+0.00035}_{-0.00033} \quad (+0.7\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.04110^{+0.00060}_{-0.00061} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1184^{+0.0030}_{-0.0031} \quad (-0.5\sigma)$	$H_0$	$68.0^{+1.4}_{-1.4} \quad (+0.5\sigma)$	$z_{\text{drag}}$	$1059.96^{+0.67}_{-0.64} \quad (+0.6\sigma)$
$100\theta_{\text{MC}}$	$1.04091^{+0.00061}_{-0.00062} \quad (+0.2\sigma)$	$\Omega_\Lambda$	$0.694^{+0.019}_{-0.019} \quad (+0.5\sigma)$	$r_{\text{drag}}$	$147.44^{+0.66}_{-0.64} \quad (+0.2\sigma)$
$\tau$	$0.100^{+0.048}_{-0.050} \quad (-0.0\sigma)$	$\Omega_m$	$0.306^{+0.019}_{-0.019} \quad (-0.5\sigma)$	$k_D$	$0.14056^{+0.00068}_{-0.00066} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.129^{+0.094}_{-0.096} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1415^{+0.0028}_{-0.0029} \quad (-0.4\sigma)$	$100\theta_D$	$0.16070^{+0.00038}_{-0.00038} \quad (-0.8\sigma)$
$n_s$	$0.971^{+0.011}_{-0.010} \quad (+0.7\sigma)$	$\Omega_m h^3$	$0.09617^{+0.00058}_{-0.00058} \quad (+0.4\sigma)$	$z_{\text{eq}}$	$3365^{+67}_{-70} \quad (-0.4\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0047}_{-0.0048} \quad (-0.1\sigma)$	$\sigma_8$	$0.842^{+0.037}_{-0.038} \quad (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.820^{+0.014}_{-0.013} \quad (+0.4\sigma)$
$A_{100}^{\text{PS}}$	$240^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.466^{+0.021}_{-0.021} \quad (-0.6\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0719^{+0.0011}_{-0.0010} \quad (+0.5\sigma)$
$A_{143}^{\text{PS}}$	$37^{+20}_{-20} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.626^{+0.027}_{-0.025} \quad (-0.4\sigma)$	$H(0.57)$	$93.19^{+0.64}_{-0.59} \quad (+0.6\sigma)$
$A_{217}^{\text{PS}}$	$100^{+30}_{-30} \quad (+0.2\sigma)$	$\sigma_8/h^{0.5}$	$1.021^{+0.043}_{-0.044} \quad (-0.4\sigma)$	$D_A(0.57)$	$1383^{+18}_{-19} \quad (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$44^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.52^{+0.10}_{-0.10} \quad (-0.5\sigma)$	$F_{\text{AP}}(0.57)$	$0.6747^{+0.0047}_{-0.0048} \quad (-0.5\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.92 \quad (-1.0\sigma)$	$z_{\text{re}}$	$11.7^{+3.9}_{-4.1} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.488^{+0.021}_{-0.021} \quad (-0.4\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.23}$	$10^9 A_s$	$2.29^{+0.22}_{-0.22} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.628^{+0.029}_{-0.030} \quad (-0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.870^{+0.025}_{-0.024} \quad (-0.7\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24633^{+0.00014}_{-0.00015} \quad (-4.7\sigma)$
$A^{\text{kSZ}}$	—	$D_{40}$	$1234^{+29}_{-27} \quad (-0.9\sigma)$	$f_{2000}^{143}$	$27^{+6}_{-6} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.37}_{-0.38}$	$D_{220}$	$5709^{+74}_{-77} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$105.1^{+3.8}_{-4.0} \quad (+0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.35}$	$D_{810}$	$2527^{+26}_{-26} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+4}_{-4} \quad (-0.6\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	$814.7^{+9.0}_{-9.1} \quad (+0.0\sigma)$	$\chi_{\text{lowl}}^2$	$14.5 (\nu: 0.9) \quad (-0.8\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.971^{+0.011}_{-0.010} \quad (+0.7\sigma)$	$\chi_{\text{CamSpec}}^2$	$12951.7 (\nu: 17.8)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_{\text{P}}$	$0.24500^{+0.00015}_{-0.00014} \quad (-4.8\sigma)$	$\chi_{\text{prior}}^2$	$8.9 (\nu: 6.2) \quad (-1.9\sigma)$
$c_{217}$	$0.9969^{+0.0036}_{-0.0035} \quad (+0.7\sigma)$	$\text{Age/Gyr}$	$13.784^{+0.055}_{-0.056} \quad (-0.6\sigma)$	$\chi_{\text{CMB}}^2$	$12966.2 (\nu: 17.5) \quad (+1576.7\sigma)$
$c_{TE}$	$1.0028^{+0.0092}_{-0.0090}$	$z_*$	$1089.68^{+0.63}_{-0.64} \quad (-0.7\sigma)$		
$c_{EE}$	$1.0003^{+0.0083}_{-0.0082}$	$r_*$	$144.80^{+0.67}_{-0.65} \quad (+0.3\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 12975.01; \Delta\bar{\chi}_{\text{eff}}^2 = 10490.75; R - 1 = 0.01135$$

### 2.53 base\_CamSpecHM\_TTTEEE\_lowl\_post\_BAO\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02243^{+0.00029}_{-0.00029} (+0.6\sigma)$	$H_0$	$67.92^{+0.99}_{-0.96} (+0.4\sigma)$	$r_{\text{drag}}$	$147.42^{+0.51}_{-0.51} (-0.0\sigma)$
$\Omega_c h^2$	$0.1185^{+0.0021}_{-0.0022} (-0.3\sigma)$	$\Omega_\Lambda$	$0.693^{+0.013}_{-0.013} (+0.3\sigma)$	$k_D$	$0.14058^{+0.00061}_{-0.00059} (+0.3\sigma)$
$100\theta_{\text{MC}}$	$1.04090^{+0.00056}_{-0.00057} (+0.0\sigma)$	$\Omega_m$	$0.307^{+0.013}_{-0.013} (-0.3\sigma)$	$100\theta_D$	$0.16071^{+0.00036}_{-0.00036} (-0.7\sigma)$
$\tau$	$0.099^{+0.046}_{-0.046} (-0.2\sigma)$	$\Omega_m h^2$	$0.1416^{+0.0020}_{-0.0020} (-0.2\sigma)$	$z_{\text{eq}}$	$3368^{+49}_{-49} (-0.2\sigma)$
$\ln(10^{10} A_s)$	$3.126^{+0.090}_{-0.091} (-0.3\sigma)$	$\Omega_m h^3$	$0.09616^{+0.00058}_{-0.00057} (+0.4\sigma)$	$100\theta_{\text{eq}}$	$0.8196^{+0.0094}_{-0.0092} (+0.3\sigma)$
$n_s$	$0.9705^{+0.0086}_{-0.0086} (+0.6\sigma)$	$\sigma_8$	$0.842^{+0.037}_{-0.037} (-0.3\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07181^{+0.00074}_{-0.00072} (+0.3\sigma)$
$y_{\text{cal}}$	$1.0000^{+0.0047}_{-0.0048} (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.466^{+0.021}_{-0.020} (-0.5\sigma)$	$H(0.57)$	$93.16^{+0.46}_{-0.43} (+0.5\sigma)$
$A_{100}^{\text{PS}}$	$240^{+40}_{-40} (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.626^{+0.027}_{-0.027} (-0.4\sigma)$	$D_A(0.57)$	$1383^{+13}_{-13} (-0.4\sigma)$
$A_{143}^{\text{PS}}$	$37^{+10}_{-10} (-0.7\sigma)$	$\sigma_8/h^{0.5}$	$1.021^{+0.043}_{-0.044} (-0.4\sigma)$	$F_{\text{AP}}(0.57)$	$0.6749^{+0.0033}_{-0.0033} (-0.3\sigma)$
$A_{217}^{\text{PS}}$	$100^{+30}_{-30} (+0.2\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.52^{+0.10}_{-0.097} (-0.5\sigma)$	$f\sigma_8(0.57)$	$0.488^{+0.021}_{-0.021} (-0.4\sigma)$
$A_{217}^{\text{CIB}}$	$44^{+10}_{-10} (-2.8\sigma)$	$z_{\text{re}}$	$11.6^{+3.7}_{-3.9} (-0.2\sigma)$	$\sigma_8(0.57)$	$0.627^{+0.028}_{-0.029} (-0.3\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.90 (-1.0\sigma)$	$10^9 A_s$	$2.28^{+0.21}_{-0.21} (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24633^{+0.00012}_{-0.00013} (-5.7\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.24}_{-0.23}$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.022}_{-0.021} (-0.6\sigma)$	$f_{2000}^{143}$	$27^{+5}_{-5} (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1233^{+28}_{-26} (-0.9\sigma)$	$f_{2000}^{217}$	$105.2^{+3.7}_{-3.8} (+0.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5708^{+72}_{-76} (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+4}_{-4} (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.37}_{-0.39}$	$D_{810}$	$2528^{+26}_{-26} (-0.4\sigma)$	$\chi_{\text{lowl}}^2$	$14.5 (\nu: 0.9) (-0.8\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.35}$	$D_{1420}$	$814.6^{+8.9}_{-8.9} (-0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$12951.2 (\nu: 17.1)$
$A_{217}^{\text{dust}}$	$1.23^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.9705^{+0.0086}_{-0.0086} (+0.6\sigma)$	$\chi_{6\text{DF}}^2$	$0.036 (\nu: 0.0) (-0.2\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$Y_{\text{P}}$	$0.24500^{+0.00013}_{-0.00012} (-5.8\sigma)$	$\chi_{\text{MGS}}^2$	$1.55 (\nu: 0.1) (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.8\sigma)$	$\text{Age/Gyr}$	$13.786^{+0.042}_{-0.044} (-0.5\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.76 (\nu: 0.1) (-0.1\sigma)$
$c_{217}$	$0.9969^{+0.0036}_{-0.0035} (+0.7\sigma)$	$z_*$	$1089.70^{+0.48}_{-0.48} (-0.6\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.52 (\nu: 0.1) (-0.3\sigma)$
$c_{TE}$	$1.0029^{+0.0092}_{-0.0089}$	$r_*$	$144.77^{+0.49}_{-0.50} (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.9 (\nu: 6.2) (-1.9\sigma)$
$c_{EE}$	$1.0003^{+0.0083}_{-0.0082}$	$100\theta_*$	$1.04109^{+0.00055}_{-0.00056} (+0.0\sigma)$	$\chi_{\text{BAO}}^2$	$4.87 (\nu: 0.3) (-0.0\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	$1059.95^{+0.64}_{-0.63} (+0.5\sigma)$	$\chi_{\text{CMB}}^2$	$12965.6 (\nu: 16.7) (+1595.5\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 12979.37; \Delta\bar{\chi}_{\text{eff}}^2 = 10490.69; R - 1 = 0.00956$$

## 2.54 base\_plikHM\_TT\_lowl\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02230	$0.02228^{+0.00051}_{-0.00050}$	$\Omega_m h^2$	0.14114	$0.1412^{+0.0045}_{-0.0046}$	$z_{\text{drag}}$	1059.63	$1059.6^{+1.0}_{-0.96}$
$\Omega_c h^2$	0.11819	$0.1182^{+0.0049}_{-0.0050}$	$\Omega_m h^3$	0.09594	$0.09592^{+0.00090}_{-0.00088}$	$r_{\text{drag}}$	147.65	$147.7^{+1.0}_{-1.0}$
$100\theta_{\text{MC}}$	1.04106	$1.0411^{+0.0010}_{-0.0010}$	$\sigma_8$	0.8175	$0.817^{+0.025}_{-0.024}$	$k_{\text{D}}$	0.14022	$0.1402^{+0.0010}_{-0.0010}$
$\tau$	0.0706	$0.070^{+0.049}_{-0.046}$	$\sigma_8 \Omega_m^{0.5}$	0.4518	$0.452^{+0.018}_{-0.018}$	$100\theta_{\text{D}}$	0.16094	$0.16097^{+0.00054}_{-0.00054}$
$\ln(10^{10} A_s)$	3.071	$3.069^{+0.086}_{-0.081}$	$\sigma_8 \Omega_m^{0.25}$	0.6077	$0.607^{+0.015}_{-0.015}$	$z_{\text{eq}}$	3357	$3358^{+110}_{-110}$
$n_s$	0.9689	$0.969^{+0.015}_{-0.014}$	$\sigma_8/h^{0.5}$	0.9915	$0.991^{+0.024}_{-0.024}$	$k_{\text{eq}}$	0.010247	$0.01025^{+0.00033}_{-0.00034}$
$y_{\text{cal}}$	1.00005	$1.0001^{+0.0048}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.452	$2.451^{+0.056}_{-0.057}$	$100\theta_{\text{eq}}$	0.8213	$0.821^{+0.022}_{-0.021}$
$A_{217}^{\text{CIB}}$	67.3	$64^{+10}_{-10}$	$z_{\text{re}}$	9.26	$9.0^{+4.4}_{-4.6}$	$100\theta_{\text{s,eq}}$	0.4536	$0.454^{+0.011}_{-0.011}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.156	$2.15^{+0.19}_{-0.18}$	$r_{\text{drag}}/D_V(0.57)$	0.07193	$0.0719^{+0.0018}_{-0.0017}$
$A_{143}^{\text{tSZ}}$	7.16	$5.1^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8720	$1.872^{+0.029}_{-0.030}$	$H(0.57)$	93.13	$93.1^{+1.0}_{-1.0}$
$A_{100}^{\text{PS}}$	254	$259^{+50}_{-50}$	$D_{40}$	1224.4	$1227^{+26}_{-25}$	$D_A(0.57)$	1382.9	$1383^{+30}_{-31}$
$A_{143}^{\text{PS}}$	39.2	$44^{+20}_{-20}$	$D_{220}$	5717	$5718^{+79}_{-82}$	$F_{\text{AP}}(0.57)$	0.6745	$0.6746^{+0.0077}_{-0.0077}$
$A_{143 \times 217}^{\text{PS}}$	33	$38^{+20}_{-20}$	$D_{810}$	2531.5	$2531^{+27}_{-28}$	$f\sigma_8(0.57)$	0.4737	$0.473^{+0.011}_{-0.012}$
$A_{217}^{\text{PS}}$	97.1	$96^{+20}_{-20}$	$D_{1420}$	814.8	$814.5^{+9.8}_{-10}$	$\sigma_8(0.57)$	0.6097	$0.609^{+0.024}_{-0.023}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.27	$230.1^{+3.7}_{-3.8}$	$f_{2000}^{143}$	29.9	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.47	$7.5^{+3.7}_{-3.7}$	$n_{\text{s},0.002}$	0.9689	$0.969^{+0.015}_{-0.014}$	$f_{2000}^{143 \times 217}$	32.47	$33^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.06	$9.1^{+3.6}_{-3.6}$	$Y_{\text{P}}$	0.245360	$0.24535^{+0.00023}_{-0.00023}$	$f_{2000}^{217}$	106.03	$106.2^{+4.1}_{-4.2}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.1}_{-8.1}$	$Y_{\text{P}}^{\text{BBN}}$	0.246687	$0.24668^{+0.00023}_{-0.00023}$	$\chi_{\text{lensing}}^2$	9.37	10.1 ( $\nu$ : 1.7)
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	2.605	$2.609^{+0.097}_{-0.096}$	$\chi_{\text{lowl}}^2$	13.29	13.52 ( $\nu$ : 0.5)
$c_{100}$	0.99790	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.793	$13.794^{+0.087}_{-0.091}$	$\chi_{\text{plik}}^2$	766.1	779.7 ( $\nu$ : 15.9)
$c_{217}$	0.99596	$0.9960^{+0.0029}_{-0.0028}$	$z_*$	1089.85	$1089.88^{+0.98}_{-0.99}$	$\chi_{\text{prior}}^2$	2.1	7.5 ( $\nu$ : 6.4)
$H_0$	67.98	$68.0^{+2.3}_{-2.2}$	$r_*$	144.96	$145.0^{+1.1}_{-1.0}$	$\chi_{\text{CMB}}^2$	788.7	803.4 ( $\nu$ : 15.2)
$\Omega_{\Lambda}$	0.6946	$0.694^{+0.029}_{-0.031}$	$100\theta_*$	1.04126	$1.04127^{+0.00099}_{-0.00099}$			
$\Omega_{\text{m}}$	0.3054	$0.306^{+0.031}_{-0.029}$	$D_{\text{A}}/\text{Gpc}$	13.921	$13.922^{+0.097}_{-0.095}$			

Best-fit  $\chi_{\text{eff}}^2 = 790.81$ ;  $\bar{\chi}_{\text{eff}}^2 = 810.82$ ;  $R - 1 = 0.00684$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.37 commander\_rc2\_v1.1\_l2\_29\_B: 13.29 plik\_dx11dr2\_HM\_v18.TT: 766.07

## 2.55 base\_plikHM\_TT\_lowl\_lensing\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022263	$0.02226^{+0.00040}_{-0.00039}$	$\Omega_m h^3$	0.09592	$0.09591^{+0.00089}_{-0.00087}$	$k_D$	0.14025	$0.14023^{+0.00083}_{-0.00083}$
$\Omega_c h^2$	0.11853	$0.1185^{+0.0026}_{-0.0026}$	$\sigma_8$	0.8164	$0.816^{+0.021}_{-0.021}$	$100\theta_D$	0.160969	$0.16098^{+0.00050}_{-0.00050}$
$100\theta_{MC}$	1.04102	$1.04103^{+0.00084}_{-0.00082}$	$\sigma_8 \Omega_m^{0.5}$	0.4527	$0.452^{+0.013}_{-0.013}$	$z_{eq}$	3364	$3364^{+59}_{-59}$
$\tau$	0.0677	$0.067^{+0.032}_{-0.032}$	$\sigma_8 \Omega_m^{0.25}$	0.6079	$0.607^{+0.015}_{-0.015}$	$k_{eq}$	0.010269	$0.01027^{+0.00018}_{-0.00018}$
$\ln(10^{10} A_s)$	3.066	$3.064^{+0.058}_{-0.059}$	$\sigma_8/h^{0.5}$	0.9913	$0.990^{+0.024}_{-0.024}$	$100\theta_{eq}$	0.8199	$0.820^{+0.011}_{-0.011}$
$n_s$	0.9681	$0.9677^{+0.0094}_{-0.0092}$	$\langle d^2 \rangle^{1/2}$	2.451	$2.450^{+0.056}_{-0.057}$	$100\theta_{s,eq}$	0.4529	$0.4529^{+0.0058}_{-0.0057}$
$y_{cal}$	0.99997	$1.0001^{+0.0049}_{-0.0050}$	$z_{re}$	9.00	$8.8^{+3.0}_{-3.2}$	$r_{drag}/D_V(0.57)$	0.07181	$0.07182^{+0.00090}_{-0.00088}$
$A_{217}^{CIB}$	67.5	$65^{+10}_{-10}$	$10^9 A_s$	2.145	$2.14^{+0.13}_{-0.12}$	$H(0.57)$	93.06	$93.06^{+0.58}_{-0.56}$
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8732	$1.873^{+0.023}_{-0.023}$	$D_A(0.57)$	1385.0	$1385^{+16}_{-16}$
$A_{143}^{tSZ}$	7.19	$5.1^{+3.8}_{-3.8}$	$D_{40}$	1224.9	$1227^{+23}_{-23}$	$F_{AP}(0.57)$	0.67501	$0.6750^{+0.0041}_{-0.0040}$
$A_{100}^{PS}$	254	$260^{+50}_{-50}$	$D_{220}$	5714	$5717^{+78}_{-81}$	$f\sigma_8(0.57)$	0.4736	$0.473^{+0.011}_{-0.012}$
$A_{143}^{PS}$	39.4	$44^{+20}_{-20}$	$D_{810}$	2531.6	$2532^{+27}_{-28}$	$\sigma_8(0.57)$	0.6083	$0.608^{+0.018}_{-0.017}$
$A_{143 \times 217}^{PS}$	33	$38^{+20}_{-20}$	$D_{1420}$	814.6	$814.4^{+9.7}_{-10}$	$f_{2000}^{143}$	30.0	$30^{+6}_{-6}$
$A_{217}^{PS}$	97.1	$96^{+20}_{-20}$	$D_{2000}$	230.10	$230.0^{+3.4}_{-3.5}$	$f_{2000}^{143 \times 217}$	32.60	$33^{+4}_{-4}$
$A^{kSZ}$	0.0	—	$n_{s,0.002}$	0.9681	$0.9677^{+0.0094}_{-0.0092}$	$f_{2000}^{217}$	106.15	$106.3^{+3.9}_{-3.9}$
$A_{100}^{dustTT}$	7.45	$7.5^{+3.7}_{-3.7}$	$Y_P$	0.245346	$0.24534^{+0.00018}_{-0.00018}$	$\chi^2_{lensing}$	9.36	$10.1 (\nu: 1.6)$
$A_{143}^{dustTT}$	9.09	$9.1^{+3.5}_{-3.6}$	$Y_P^{BBN}$	0.246672	$0.24667^{+0.00018}_{-0.00018}$	$\chi^2_{lowl}$	13.34	$13.50 (\nu: 0.4)$
$A_{143 \times 217}^{dustTT}$	17.8	$17.2^{+8.1}_{-8.0}$	$10^5 D/H$	2.611	$2.613^{+0.075}_{-0.075}$	$\chi^2_{plik}$	766.0	$779.1 (\nu: 15.0)$
$A_{217}^{dustTT}$	82.0	$82^{+10}_{-10}$	$Age/Gyr$	13.799	$13.799^{+0.058}_{-0.059}$	$\chi^2_{6DF}$	0.006	$0.051 (\nu: 0.0)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1089.92	$1089.94^{+0.62}_{-0.62}$	$\chi^2_{MGS}$	1.47	$1.55 (\nu: 0.2)$
$c_{217}$	0.99599	$0.9960^{+0.0028}_{-0.0028}$	$r_*$	144.90	$144.90^{+0.63}_{-0.62}$	$\chi^2_{DR11CMAS}$	2.40	$2.90 (\nu: 0.3)$
$H_0$	67.82	$67.8^{+1.2}_{-1.2}$	$100\theta_*$	1.04122	$1.04123^{+0.00083}_{-0.00082}$	$\chi^2_{DR11LOWZ}$	0.42	$0.58 (\nu: 0.2)$
$\Omega_\Lambda$	0.6925	$0.692^{+0.015}_{-0.016}$	$D_A/Gpc$	13.916	$13.916^{+0.061}_{-0.060}$	$\chi^2_{prior}$	2.1	$7.4 (\nu: 6.2)$
$\Omega_m$	0.3075	$0.308^{+0.016}_{-0.015}$	$z_{drag}$	1059.59	$1059.57^{+0.88}_{-0.85}$	$\chi^2_{CMB}$	788.7	$802.8 (\nu: 14.5)$
$\Omega_m h^2$	0.14143	$0.1414^{+0.0025}_{-0.0024}$	$r_{drag}$	147.60	$147.61^{+0.67}_{-0.66}$	$\chi^2_{BAO}$	4.30	$5.1 (\nu: 0.6)$

Best-fit  $\chi^2_{eff} = 795.13$ ;  $\bar{\chi}^2_{eff} = 815.27$ ;  $R - 1 = 0.01077$

$\chi^2_{eff}$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMAS: 2.40 DR11LOWZ: 0.42 CMB - smica\_g30\_ftl\_full\_pp: 9.36 commander\_rc2\_v1.1\_l2\_29\_B: 13.34 plik\_dx11dr2\_HM.v18.TT: 766.05



## 2.56 base\_plikHM\_TT\_lowl\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022305	$0.02228^{+0.00039}_{-0.00039}$	$\sigma_8$	0.8177	$0.817^{+0.021}_{-0.021}$	$z_{\text{eq}}$	3359	$3358^{+57}_{-57}$
$\Omega_c h^2$	0.11827	$0.1183^{+0.0025}_{-0.0025}$	$\sigma_8 \Omega_m^{0.5}$	0.4521	$0.452^{+0.013}_{-0.013}$	$k_{\text{eq}}$	0.010253	$0.01025^{+0.00017}_{-0.00017}$
$100\theta_{\text{MC}}$	1.04108	$1.04107^{+0.00083}_{-0.00082}$	$\sigma_8 \Omega_m^{0.25}$	0.6080	$0.607^{+0.015}_{-0.015}$	$100\theta_{\text{eq}}$	0.8210	$0.821^{+0.011}_{-0.011}$
$\tau$	0.0704	$0.069^{+0.031}_{-0.032}$	$\sigma_8/h^{0.5}$	0.9919	$0.991^{+0.024}_{-0.024}$	$100\theta_{\text{s,eq}}$	0.4534	$0.4535^{+0.0056}_{-0.0055}$
$\ln(10^{10} A_s)$	3.071	$3.068^{+0.057}_{-0.058}$	$\langle d^2 \rangle^{1/2}$	2.453	$2.450^{+0.055}_{-0.057}$	$r_{\text{drag}}/D_V(0.57)$	0.07191	$0.07192^{+0.00086}_{-0.00084}$
$n_s$	0.9688	$0.9684^{+0.0091}_{-0.0090}$	$z_{\text{re}}$	9.24	$9.1^{+2.9}_{-3.1}$	$H(0.57)$	93.14	$93.12^{+0.57}_{-0.55}$
$y_{\text{cal}}$	1.00006	$1.0001^{+0.0049}_{-0.0049}$	$10^9 A_s$	2.156	$2.15^{+0.13}_{-0.12}$	$D_A(0.57)$	1383.0	$1383^{+15}_{-15}$
$A_{217}^{\text{CIB}}$	67.3	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8726	$1.872^{+0.023}_{-0.023}$	$F_{\text{AP}}(0.57)$	0.67456	$0.6746^{+0.0039}_{-0.0038}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1224.9	$1226^{+23}_{-23}$	$f\sigma_8(0.57)$	0.4739	$0.473^{+0.011}_{-0.011}$
$A_{143}^{\text{tSZ}}$	7.21	$5.1^{+3.8}_{-3.8}$	$D_{220}$	5718	$5718^{+78}_{-82}$	$\sigma_8(0.57)$	0.6097	$0.609^{+0.018}_{-0.017}$
$A_{100}^{\text{PS}}$	253	$259^{+50}_{-50}$	$D_{810}$	2532.1	$2531^{+27}_{-28}$	$f_{2000}^{143}$	29.8	$30^{+6}_{-6}$
$A_{143}^{\text{PS}}$	38.9	$44^{+20}_{-20}$	$D_{1420}$	815.1	$814.6^{+9.7}_{-9.8}$	$f_{2000}^{143 \times 217}$	32.41	$33^{+4}_{-4}$
$A_{143 \times 217}^{\text{PS}}$	32	$38^{+20}_{-20}$	$D_{2000}$	230.36	$230.1^{+3.4}_{-3.4}$	$f_{2000}^{217}$	105.94	$106.2^{+3.9}_{-3.9}$
$A_{217}^{\text{PS}}$	96.9	$96^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9688	$0.9684^{+0.0091}_{-0.0090}$	$\chi_{\text{lensing}}^2$	9.43	$10.1 (\nu: 1.6)$
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.245364	$0.24535^{+0.00018}_{-0.00018}$	$\chi_{\text{lowl}}^2$	13.33	$13.44 (\nu: 0.3)$
$A_{100}^{\text{dustTT}}$	7.44	$7.5^{+3.7}_{-3.7}$	$Y_{\text{P}}^{\text{BBN}}$	0.246691	$0.24668^{+0.00018}_{-0.00018}$	$\chi_{\text{plik}}^2$	765.9	$779.2 (\nu: 15.0)$
$A_{143}^{\text{dustTT}}$	9.11	$9.1^{+3.5}_{-3.6}$	$10^5 D/H$	2.604	$2.608^{+0.074}_{-0.074}$	$\chi_{\text{H070p6}}^2$	0.63	$0.67 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.1}_{-8.0}$	$\text{Age/Gyr}$	13.792	$13.794^{+0.058}_{-0.058}$	$\chi_{\text{JLA}}^2$	706.607	$706.66 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	82.2	$82^{+10}_{-10}$	$z_*$	1089.85	$1089.88^{+0.60}_{-0.60}$	$\chi_{6\text{DF}}^2$	0.001	$0.043 (\nu: 0.0)$
$c_{100}$	0.99788	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.93	$144.95^{+0.61}_{-0.61}$	$\chi_{\text{MGS}}^2$	1.61	$1.69 (\nu: 0.2)$
$c_{217}$	0.99599	$0.9960^{+0.0028}_{-0.0028}$	$100\theta_*$	1.04128	$1.04127^{+0.00082}_{-0.00081}$	$\chi_{\text{DR11CMass}}^2$	2.44	$2.90 (\nu: 0.2)$
$H_0$	67.97	$68.0^{+1.1}_{-1.1}$	$D_A/\text{Gpc}$	13.918	$13.921^{+0.060}_{-0.059}$	$\chi_{\text{DR11LOWZ}}^2$	0.32	$0.46 (\nu: 0.1)$
$\Omega_\Lambda$	0.6943	$0.694^{+0.015}_{-0.015}$	$z_{\text{drag}}$	1059.67	$1059.61^{+0.86}_{-0.86}$	$\chi_{\text{prior}}^2$	2.2	$7.4 (\nu: 6.2)$
$\Omega_m$	0.3057	$0.306^{+0.015}_{-0.015}$	$r_{\text{drag}}$	147.62	$147.65^{+0.66}_{-0.66}$	$\chi_{\text{CMB}}^2$	788.7	$802.7 (\nu: 14.4)$
$\Omega_m h^2$	0.14122	$0.1412^{+0.0024}_{-0.0024}$	$k_{\text{D}}$	0.14026	$0.14021^{+0.00084}_{-0.00084}$	$\chi_{\text{BAO}}^2$	4.36	$5.1 (\nu: 0.6)$
$\Omega_m h^3$	0.09598	$0.09593^{+0.00089}_{-0.00088}$	$100\theta_{\text{D}}$	0.16093	$0.16096^{+0.00050}_{-0.00049}$			

Best-fit  $\chi_{\text{eff}}^2 = 1502.43$ ;  $\bar{\chi}_{\text{eff}}^2 = 1522.55$ ;  $R - 1 = 0.01084$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMass: 2.44 DR11LOWZ: 0.32 CMB - smica\_g30\_ftl\_full\_pp: 9.43 commander\_rc2\_v1.1\_l2\_29\_B: 13.33 plik\_dx11dr2\_HM\_v18\_TT: 765.90 Hubble - H070p6: 0.63 SN - JLA December\_2013: 706.61

## 2.57 base\_plikHM\_TT\_lowl\_lensing\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00050}_{-0.00045}$	$\Omega_m h^2$	$0.1407^{+0.0041}_{-0.0042}$	$z_{\text{drag}}$	$1059.65^{+0.97}_{-0.89}$
$\Omega_c h^2$	$0.1177^{+0.0044}_{-0.0045}$	$\Omega_m h^3$	$0.09594^{+0.00090}_{-0.00089}$	$r_{\text{drag}}$	$147.76^{+0.97}_{-0.94}$
$100\theta_{\text{MC}}$	$1.04115^{+0.00098}_{-0.00094}$	$\sigma_8$	$0.820^{+0.022}_{-0.021}$	$k_{\text{D}}$	$0.14012^{+0.00095}_{-0.0010}$
$\tau$	$0.076^{+0.040}_{-0.036}$	$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.018}_{-0.018}$	$100\theta_{\text{D}}$	$0.16094^{+0.00052}_{-0.00053}$
$\ln(10^{10} A_s)$	$3.079^{+0.072}_{-0.064}$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.015}_{-0.015}$	$z_{\text{eq}}$	$3346^{+97}_{-100}$
$n_s$	$0.970^{+0.014}_{-0.013}$	$\sigma_8/h^{0.5}$	$0.992^{+0.023}_{-0.022}$	$k_{\text{eq}}$	$0.01021^{+0.00030}_{-0.00031}$
$y_{\text{cal}}$	$1.0000^{+0.0049}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	$2.455^{+0.053}_{-0.052}$	$100\theta_{\text{eq}}$	$0.824^{+0.020}_{-0.019}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$z_{\text{re}}$	$< 12.7$	$100\theta_{\text{s,eq}}$	$0.455^{+0.010}_{-0.0097}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s$	$2.18^{+0.16}_{-0.14}$	$r_{\text{drag}}/D_{\text{V}}(0.57)$	$0.0721^{+0.0016}_{-0.0015}$
$A_{143}^{\text{tSZ}}$	$5.2^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.026}_{-0.028}$	$H(0.57)$	$93.24^{+0.96}_{-0.90}$
$A_{100}^{\text{PS}}$	$258^{+50}_{-50}$	$D_{40}$	$1225^{+24}_{-24}$	$D_{\text{A}}(0.57)$	$1380^{+27}_{-28}$
$A_{143}^{\text{PS}}$	$43^{+20}_{-20}$	$D_{220}$	$5718^{+80}_{-82}$	$F_{\text{AP}}(0.57)$	$0.6737^{+0.0068}_{-0.0070}$
$A_{143 \times 217}^{\text{PS}}$	$38^{+20}_{-20}$	$D_{810}$	$2530^{+27}_{-27}$	$f\sigma_8(0.57)$	$0.474^{+0.011}_{-0.011}$
$A_{217}^{\text{PS}}$	$96^{+20}_{-20}$	$D_{1420}$	$814.6^{+9.8}_{-10}$	$\sigma_8(0.57)$	$0.612^{+0.020}_{-0.018}$
$A^{\text{kSZ}}$	—	$D_{2000}$	$230.3^{+3.6}_{-3.7}$	$f_{2000}^{143}$	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	$7.4^{+3.7}_{-3.8}$	$n_{\text{s},0.002}$	$0.970^{+0.014}_{-0.013}$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	$9.1^{+3.6}_{-3.6}$	$Y_{\text{P}}$	$0.24537^{+0.00022}_{-0.00021}$	$f_{2000}^{217}$	$106.0^{+4.0}_{-4.0}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.2^{+8.1}_{-8.0}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24670^{+0.00022}_{-0.00021}$	$\chi_{\text{lensing}}^2$	$10.2 (\nu: 1.9)$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	$2.601^{+0.087}_{-0.092}$	$\chi_{\text{lowl}}^2$	$13.43 (\nu: 0.4)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$\text{Age}/\text{Gyr}$	$13.785^{+0.082}_{-0.085}$	$\chi_{\text{plik}}^2$	$779.5 (\nu: 16.0)$
$c_{217}$	$0.9960^{+0.0029}_{-0.0028}$	$z_*$	$1089.78^{+0.86}_{-0.93}$	$\chi_{\text{prior}}^2$	$7.4 (\nu: 6.4)$
$H_0$	$68.2^{+2.1}_{-2.0}$	$r_*$	$145.1^{+1.0}_{-0.95}$	$\chi_{\text{CMB}}^2$	$803.2 (\nu: 15.0)$
$\Omega_{\Lambda}$	$0.697^{+0.027}_{-0.026}$	$100\theta_*$	$1.04134^{+0.00096}_{-0.00091}$		
$\Omega_{\text{m}}$	$0.303^{+0.026}_{-0.027}$	$D_{\text{A}}/\text{Gpc}$	$13.931^{+0.091}_{-0.088}$		

$$\bar{\chi}_{\text{eff}}^2 = 810.60; R - 1 = 0.00977$$

## 2.58 base\_plikHM\_TT\_lowl\_lensing\_post\_BAO\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02227^{+0.00039}_{-0.00038}$	$\Omega_m h^3$	$0.09592^{+0.00089}_{-0.00088}$	$k_D$	$0.14022^{+0.00084}_{-0.00084}$
$\Omega_c h^2$	$0.1184^{+0.0025}_{-0.0025}$	$\sigma_8$	$0.817^{+0.019}_{-0.019}$	$100\theta_D$	$0.16098^{+0.00050}_{-0.00049}$
$100\theta_{MC}$	$1.04105^{+0.00083}_{-0.00081}$	$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.013}_{-0.013}$	$z_{eq}$	$3362^{+56}_{-57}$
$\tau$	$0.069^{+0.027}_{-0.027}$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.014}_{-0.014}$	$k_{eq}$	$0.01026^{+0.00017}_{-0.00017}$
$\ln(10^{10} A_s)$	$3.068^{+0.052}_{-0.050}$	$\sigma_8/h^{0.5}$	$0.992^{+0.023}_{-0.021}$	$100\theta_{eq}$	$0.820^{+0.011}_{-0.011}$
$n_s$	$0.9681^{+0.0091}_{-0.0088}$	$\langle d^2 \rangle^{1/2}$	$2.453^{+0.053}_{-0.050}$	$100\theta_{s,eq}$	$0.4532^{+0.0056}_{-0.0054}$
$y_{cal}$	$1.0001^{+0.0049}_{-0.0050}$	$z_{re}$	$< 11.3$	$r_{drag}/D_V(0.57)$	$0.07186^{+0.00087}_{-0.00083}$
$A_{217}^{CIB}$	$65^{+10}_{-10}$	$10^9 A_s$	$2.15^{+0.11}_{-0.11}$	$H(0.57)$	$93.09^{+0.57}_{-0.54}$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.873^{+0.022}_{-0.023}$	$D_A(0.57)$	$1384^{+15}_{-16}$
$A_{143}^{tSZ}$	$5.1^{+3.8}_{-3.8}$	$D_{40}$	$1226^{+23}_{-23}$	$F_{AP}(0.57)$	$0.6748^{+0.0038}_{-0.0038}$
$A_{100}^{PS}$	$259^{+50}_{-50}$	$D_{220}$	$5716^{+77}_{-81}$	$f\sigma_8(0.57)$	$0.474^{+0.011}_{-0.010}$
$A_{143}^{PS}$	$44^{+20}_{-20}$	$D_{810}$	$2531^{+27}_{-27}$	$\sigma_8(0.57)$	$0.609^{+0.016}_{-0.015}$
$A_{143 \times 217}^{PS}$	$38^{+20}_{-20}$	$D_{1420}$	$814.3^{+9.7}_{-10}$	$f_{2000}^{143}$	$30^{+6}_{-6}$
$A_{217}^{PS}$	$96^{+20}_{-20}$	$D_{2000}$	$230.0^{+3.4}_{-3.5}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A^{kSZ}$	—	$n_{s,0.002}$	$0.9681^{+0.0091}_{-0.0088}$	$f_{2000}^{217}$	$106.2^{+3.8}_{-3.9}$
$A_{100}^{dustTT}$	$7.5^{+3.7}_{-3.8}$	$Y_P$	$0.24535^{+0.00018}_{-0.00018}$	$\chi^2_{lensing}$	$10.1 (\nu: 1.7)$
$A_{143}^{dustTT}$	$9.1^{+3.5}_{-3.6}$	$Y_P^{BBN}$	$0.24667^{+0.00018}_{-0.00018}$	$\chi^2_{lowl}$	$13.50 (\nu: 0.4)$
$A_{143 \times 217}^{dustTT}$	$17.2^{+8.1}_{-8.0}$	$10^5 D/H$	$2.611^{+0.073}_{-0.074}$	$\chi^2_{plik}$	$778.9 (\nu: 14.8)$
$A_{217}^{dustTT}$	$82^{+10}_{-10}$	$Age/Gyr$	$13.797^{+0.057}_{-0.058}$	$\chi^2_{6DF}$	$0.045 (\nu: 0.0)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	$1089.91^{+0.60}_{-0.61}$	$\chi^2_{MGS}$	$1.60 (\nu: 0.2)$
$c_{217}$	$0.9960^{+0.0028}_{-0.0028}$	$r_*$	$144.92^{+0.61}_{-0.60}$	$\chi^2_{DR11CMass}$	$2.87 (\nu: 0.2)$
$H_0$	$67.9^{+1.2}_{-1.1}$	$100\theta_*$	$1.04125^{+0.00082}_{-0.00080}$	$\chi^2_{DR11LOWZ}$	$0.52 (\nu: 0.1)$
$\Omega_\Lambda$	$0.693^{+0.015}_{-0.015}$	$D_A/Gpc$	$13.918^{+0.060}_{-0.059}$	$\chi^2_{prior}$	$7.4 (\nu: 6.2)$
$\Omega_m$	$0.307^{+0.015}_{-0.015}$	$z_{drag}$	$1059.58^{+0.91}_{-0.86}$	$\chi^2_{CMB}$	$802.6 (\nu: 14.2)$
$\Omega_m h^2$	$0.1413^{+0.0024}_{-0.0024}$	$r_{drag}$	$147.63^{+0.66}_{-0.65}$	$\chi^2_{BAO}$	$5.0 (\nu: 0.5)$

$$\bar{\chi}^2_{eff} = 815.05; R - 1 = 0.01185$$

## 2.59 base\_plikHM\_TT\_lowl\_lensing\_post\_reion

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022162	$0.02217^{+0.00041}_{-0.00040}$	$\Omega_m h^2$	0.14280	$0.1425^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.44	$1059.45^{+0.87}_{-0.85}$
$\Omega_c h^2$	0.11999	$0.1196^{+0.0030}_{-0.0030}$	$\Omega_m h^3$	0.09590	$0.09588^{+0.00085}_{-0.00087}$	$r_{\text{drag}}$	147.33	$147.41^{+0.74}_{-0.69}$
$100\theta_{\text{MC}}$	1.04082	$1.04087^{+0.00081}_{-0.00082}$	$\sigma_8$	0.8078	$0.809^{+0.013}_{-0.012}$	$k_{\text{D}}$	0.14046	$0.14038^{+0.00085}_{-0.00088}$
$\tau$	0.0502	$0.054^{+0.015}_{-0.013}$	$\sigma_8 \Omega_m^{0.5}$	0.4546	$0.454^{+0.017}_{-0.017}$	$100\theta_{\text{D}}$	0.16103	$0.16104^{+0.00050}_{-0.00049}$
$\ln(10^{10} A_s)$	3.0347	$3.041^{+0.029}_{-0.026}$	$\sigma_8 \Omega_m^{0.25}$	0.6060	$0.606^{+0.015}_{-0.015}$	$z_{\text{eq}}$	3397	$3389^{+67}_{-67}$
$n_s$	0.9641	$0.9645^{+0.0090}_{-0.0087}$	$\sigma_8/h^{0.5}$	0.9858	$0.986^{+0.020}_{-0.021}$	$k_{\text{eq}}$	0.010368	$0.01034^{+0.00020}_{-0.00020}$
$y_{\text{cal}}$	1.00024	$1.0003^{+0.0049}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.4367	$2.440^{+0.047}_{-0.047}$	$100\theta_{\text{eq}}$	0.8136	$0.815^{+0.013}_{-0.012}$
$A_{217}^{\text{CIB}}$	68.2	$65^{+10}_{-10}$	$z_{\text{re}}$	7.30	$< 8.97$	$100\theta_{\text{s,eq}}$	0.4497	$0.4505^{+0.0067}_{-0.0065}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.080	$2.093^{+0.061}_{-0.055}$	$r_{\text{drag}}/D_V(0.57)$	0.07131	$0.0714^{+0.0010}_{-0.00097}$
$A_{143}^{\text{tSZ}}$	7.10	$5.0^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8809	$1.879^{+0.022}_{-0.022}$	$H(0.57)$	92.79	$92.85^{+0.63}_{-0.63}$
$A_{100}^{\text{PS}}$	257	$262^{+50}_{-50}$	$D_{40}$	1229.2	$1230^{+24}_{-23}$	$D_A(0.57)$	1393.9	$1392^{+18}_{-19}$
$A_{143}^{\text{PS}}$	41.1	$45^{+20}_{-20}$	$D_{220}$	5714	$5717^{+79}_{-84}$	$F_{\text{AP}}(0.57)$	0.67734	$0.6768^{+0.0045}_{-0.0047}$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$D_{810}$	2535.4	$2534^{+26}_{-26}$	$f\sigma_8(0.57)$	0.4710	$0.4712^{+0.0097}_{-0.0099}$
$A_{217}^{\text{PS}}$	97.3	$96^{+20}_{-20}$	$D_{1420}$	814.7	$814.2^{+9.9}_{-10}$	$\sigma_8(0.57)$	0.5997	$0.6013^{+0.0089}_{-0.0082}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	229.69	$229.6^{+3.5}_{-3.5}$	$f_{2000}^{143}$	30.8	$31^{+6}_{-5}$
$A_{100}^{\text{dustTT}}$	7.36	$7.4^{+3.7}_{-3.9}$	$n_{\text{s},0.002}$	0.9641	$0.9645^{+0.0090}_{-0.0087}$	$f_{2000}^{143 \times 217}$	33.29	$33^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.07	$9.0^{+3.6}_{-3.7}$	$Y_{\text{P}}$	0.245299	$0.24530^{+0.00019}_{-0.00018}$	$f_{2000}^{217}$	106.76	$106.8^{+3.9}_{-3.8}$
$A_{143 \times 217}^{\text{dustTT}}$	17.9	$17.2^{+8.3}_{-8.1}$	$Y_{\text{P}}^{\text{BBN}}$	0.246625	$0.24663^{+0.00019}_{-0.00018}$	$\chi_{\text{lensing}}^2$	8.99	$9.7 (\nu: 0.7)$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$10^5 D/H$	2.631	$2.629^{+0.079}_{-0.078}$	$\chi_{\text{lowl}}^2$	13.53	$13.66 (\nu: 0.4)$
$c_{100}$	0.99789	$0.9979^{+0.0016}_{-0.0016}$	Age/Gyr	13.821	$13.817^{+0.059}_{-0.064}$	$\chi_{\text{plik}}^2$	766.9	$779.7 (\nu: 14.9)$
$c_{217}$	0.99609	$0.9961^{+0.0028}_{-0.0028}$	$z_*$	1090.18	$1090.14^{+0.66}_{-0.68}$	$\chi_{\text{prior}}^2$	2.2	$8.4 (\nu: 7.4)$
$H_0$	67.15	$67.3^{+1.4}_{-1.3}$	$r_*$	144.59	$144.68^{+0.71}_{-0.68}$	$\chi_{\text{CMB}}^2$	789.4	$803.0 (\nu: 14.8)$
$\Omega_{\Lambda}$	0.6833	$0.685^{+0.018}_{-0.018}$	$100\theta_*$	1.04103	$1.04107^{+0.00079}_{-0.00082}$			
$\Omega_{\text{m}}$	0.3167	$0.315^{+0.018}_{-0.018}$	$D_{\text{A}}/\text{Gpc}$	13.889	$13.897^{+0.067}_{-0.065}$			

Best-fit  $\chi_{\text{eff}}^2 = 791.64$ ;  $\bar{\chi}_{\text{eff}}^2 = 811.42$ ;  $R - 1 = 0.01094$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 8.99 commander\_rc2\_v1.1\_l2\_29\_B: 13.53 plik\_dx11dr2\_HM\_v18.TT: 766.93

## 2.60 base\_plikHM\_TTTEEE\_lowl\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022267	$0.02226^{+0.00033}_{-0.00032}$	$A_{143}^{\text{dust}TE}$	0.154	$0.15^{+0.11}_{-0.11}$	$z_*$	1089.98	$1090.01^{+0.62}_{-0.62}$
$\Omega_c h^2$	0.11921	$0.1193^{+0.0031}_{-0.0031}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.16}_{-0.16}$	$r_*$	144.72	$144.69^{+0.66}_{-0.67}$
$100\theta_{\text{MC}}$	1.04086	$1.04084^{+0.00063}_{-0.00064}$	$A_{217}^{\text{dust}TE}$	1.67	$1.67^{+0.50}_{-0.51}$	$100\theta_*$	1.04106	$1.04103^{+0.00062}_{-0.00063}$
$\tau$	0.0634	$0.062^{+0.033}_{-0.033}$	$c_{100}$	0.99815	$0.9981^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.901	$13.899^{+0.061}_{-0.062}$
$\ln(10^{10} A_s)$	3.059	$3.057^{+0.061}_{-0.061}$	$c_{217}$	0.99604	$0.9961^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.63	$1059.62^{+0.63}_{-0.59}$
$n_s$	0.9658	$0.965^{+0.010}_{-0.0099}$	$H_0$	67.53	$67.5^{+1.4}_{-1.4}$	$r_{\text{drag}}$	147.42	$147.39^{+0.63}_{-0.65}$
$y_{\text{cal}}$	0.99980	$1.0002^{+0.0049}_{-0.0049}$	$\Omega_\Lambda$	0.6884	$0.687^{+0.019}_{-0.019}$	$k_D$	0.14045	$0.14046^{+0.00065}_{-0.00064}$
$A_{217}^{\text{CIB}}$	67.7	$65^{+10}_{-10}$	$\Omega_m$	0.3116	$0.313^{+0.019}_{-0.019}$	$100\theta_D$	0.160917	$0.16093^{+0.00035}_{-0.00035}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m h^2$	0.14212	$0.1422^{+0.0029}_{-0.0029}$	$z_{\text{eq}}$	3381	$3384^{+69}_{-69}$
$A_{143}^{\text{tSZ}}$	7.31	$5.2^{+3.6}_{-3.9}$	$\Omega_m h^3$	0.09597	$0.09596^{+0.00058}_{-0.00057}$	$k_{\text{eq}}$	0.010318	$0.01033^{+0.00021}_{-0.00021}$
$A_{100}^{\text{PS}}$	257	$263^{+50}_{-50}$	$\sigma_8$	0.8151	$0.815^{+0.020}_{-0.020}$	$100\theta_{\text{eq}}$	0.8168	$0.816^{+0.013}_{-0.013}$
$A_{143}^{\text{PS}}$	38.7	$44^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4550	$0.455^{+0.013}_{-0.013}$	$100\theta_{s,\text{eq}}$	0.4513	$0.4510^{+0.0069}_{-0.0066}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6090	$0.609^{+0.014}_{-0.014}$	$r_{\text{drag}}/D_V(0.57)$	0.07157	$0.0715^{+0.0011}_{-0.0010}$
$A_{217}^{\text{PS}}$	96.9	$96^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9918	$0.992^{+0.022}_{-0.022}$	$H(0.57)$	92.96	$92.93^{+0.61}_{-0.58}$
$A^{\text{kSZ}}$	0.0	—	$\langle d^2 \rangle^{1/2}$	2.454	$2.455^{+0.053}_{-0.054}$	$D_A(0.57)$	1388.8	$1390^{+18}_{-19}$
$A_{100}^{\text{dust}TT}$	7.45	$7.5^{+3.7}_{-3.7}$	$z_{\text{re}}$	8.59	$8.4^{+3.2}_{-3.5}$	$F_{\text{AP}}(0.57)$	0.67607	$0.6763^{+0.0049}_{-0.0048}$
$A_{143}^{\text{dust}TT}$	9.07	$9.0^{+3.6}_{-3.6}$	$10^9 A_s$	2.130	$2.13^{+0.13}_{-0.13}$	$f\sigma_8(0.57)$	0.4739	$0.474^{+0.011}_{-0.011}$
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.2^{+8.0}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8767	$1.879^{+0.024}_{-0.024}$	$\sigma_8(0.57)$	0.6063	$0.606^{+0.018}_{-0.017}$
$A_{217}^{\text{dust}TT}$	81.6	$82^{+10}_{-10}$	$D_{40}$	1229.5	$1233^{+24}_{-23}$	$f_{2000}^{143}$	29.8	$30^{+5}_{-5}$
$A_{100}^{\text{dust}EE}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5721	$5726^{+76}_{-75}$	$f_{2000}^{143 \times 217}$	32.58	$33^{+4}_{-4}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0489	$0.0489^{+0.0097}_{-0.0097}$	$D_{810}$	2532.6	$2534^{+27}_{-27}$	$f_{2000}^{217}$	106.11	$106.3^{+3.8}_{-3.7}$
$A_{100 \times 217}^{\text{dust}EE}$	0.100	$0.0995^{+0.064}_{-0.063}$	$D_{1420}$	814.4	$814.6^{+9.4}_{-9.4}$	$\chi^2_{\text{lensing}}$	9.76	$10.6 (\nu: 2.2)$
$A_{143}^{\text{dust}EE}$	0.1001	$0.100^{+0.014}_{-0.014}$	$D_{2000}$	229.96	$230.0^{+3.2}_{-3.2}$	$\chi^2_{\text{lowl}}$	13.71	$13.94 (\nu: 0.4)$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.224^{+0.093}_{-0.091}$	$n_{s,0.002}$	0.9658	$0.965^{+0.010}_{-0.0099}$	$\chi^2_{\text{plik}}$	2435.0	$2453.5 (\nu: 23.2)$
$A_{217}^{\text{dust}EE}$	0.656	$0.65^{+0.25}_{-0.26}$	$Y_P$	0.245347	$0.24534^{+0.00015}_{-0.00015}$	$\chi^2_{\text{prior}}$	7.1	$19.5 (\nu: 15.3)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.074}_{-0.075}$	$Y_P^{\text{BBN}}$	0.246674	$0.24667^{+0.00015}_{-0.00015}$	$\chi^2_{\text{CMB}}$	2458.5	$2478.0 (\nu: 21.9)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.056}_{-0.057}$	$10^5 \text{D/H}$	2.611	$2.613^{+0.061}_{-0.061}$			
$A_{100 \times 217}^{\text{dust}TE}$	0.304	$0.30^{+0.16}_{-0.17}$	Age/Gyr	13.806	$13.809^{+0.054}_{-0.055}$			

Best-fit  $\chi^2_{\text{eff}} = 2465.57$ ;  $\bar{\chi}^2_{\text{eff}} = 2497.50$ ;  $R - 1 = 0.01483$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.76 commander\_rc2\_v1.1.l2\_29\_B: 13.71 plik\_dx11dr2\_HM\_v18.TTTEEE: 2435.01

## 2.61 base\_plikHM\_TTTEEE\_lowl\_lensing\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022290	$0.02228^{+0.00028}_{-0.00028}$	$A_{143 \times 217}^{\text{dustTE}}$	0.338	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04109	$1.04108^{+0.00056}_{-0.00057}$
$\Omega_c h^2$	0.11893	$0.1189^{+0.0022}_{-0.0021}$	$A_{217}^{\text{dustTE}}$	1.67	$1.67^{+0.51}_{-0.51}$	$D_A/\text{Gpc}$	13.9055	$13.906^{+0.046}_{-0.047}$
$100\theta_{\text{MC}}$	1.04089	$1.04089^{+0.00057}_{-0.00058}$	$c_{100}$	0.99815	$0.9981^{+0.0016}_{-0.0015}$	$z_{\text{drag}}$	1059.67	$1059.66^{+0.58}_{-0.56}$
$\tau$	0.0660	$0.065^{+0.028}_{-0.029}$	$c_{217}$	0.99606	$0.9961^{+0.0029}_{-0.0028}$	$r_{\text{drag}}$	147.464	$147.47^{+0.49}_{-0.50}$
$\ln(10^{10} A_s)$	3.064	$3.062^{+0.052}_{-0.054}$	$H_0$	67.65	$67.65^{+0.99}_{-0.98}$	$k_D$	0.14041	$0.14040^{+0.00058}_{-0.00056}$
$n_s$	0.9666	$0.9661^{+0.0080}_{-0.0082}$	$\Omega_\Lambda$	0.6901	$0.690^{+0.013}_{-0.014}$	$100\theta_D$	0.160900	$0.16091^{+0.00034}_{-0.00034}$
$y_{\text{cal}}$	1.00003	$1.0002^{+0.0050}_{-0.0048}$	$\Omega_m$	0.3099	$0.310^{+0.014}_{-0.013}$	$z_{\text{eq}}$	3374.8	$3375^{+49}_{-48}$
$A_{217}^{\text{CIB}}$	67.6	$65^{+10}_{-10}$	$\Omega_m h^2$	0.14187	$0.1419^{+0.0020}_{-0.0020}$	$k_{\text{eq}}$	0.010300	$0.01030^{+0.00015}_{-0.00015}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.03	—	$\Omega_m h^3$	0.09598	$0.09597^{+0.00057}_{-0.00057}$	$100\theta_{\text{eq}}$	0.8180	$0.8180^{+0.0092}_{-0.0092}$
$A_{143}^{\text{tSZ}}$	7.24	$5.3^{+3.7}_{-4.0}$	$\sigma_8$	0.8164	$0.816^{+0.019}_{-0.020}$	$100\theta_{s,\text{eq}}$	0.45189	$0.4519^{+0.0047}_{-0.0047}$
$A_{100}^{\text{PS}}$	258	$262^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4545	$0.454^{+0.012}_{-0.012}$	$r_{\text{drag}}/D_V(0.57)$	0.07166	$0.07166^{+0.00074}_{-0.00073}$
$A_{143}^{\text{PS}}$	39.1	$44^{+10}_{-10}$	$\sigma_8 \Omega_m^{0.25}$	0.6092	$0.609^{+0.014}_{-0.014}$	$H(0.57)$	93.009	$93.01^{+0.46}_{-0.44}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9926	$0.992^{+0.022}_{-0.023}$	$D_A(0.57)$	1387.1	$1387^{+13}_{-13}$
$A_{217}^{\text{PS}}$	96.7	$96^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.456	$2.455^{+0.053}_{-0.054}$	$F_{\text{AP}}(0.57)$	0.67564	$0.6757^{+0.0034}_{-0.0033}$
$A^{\text{kSZ}}$	0.0	—	$z_{\text{re}}$	8.84	$8.7^{+2.7}_{-2.9}$	$f\sigma_8(0.57)$	0.4743	$0.474^{+0.011}_{-0.011}$
$A_{100}^{\text{dustTT}}$	7.43	$7.5^{+3.7}_{-3.7}$	$10^9 A_s$	2.141	$2.14^{+0.11}_{-0.11}$	$\sigma_8(0.57)$	0.6077	$0.607^{+0.016}_{-0.016}$
$A_{143}^{\text{dustTT}}$	9.09	$9.0^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8764	$1.877^{+0.022}_{-0.022}$	$f_{2000}^{143}$	29.7	$30^{+5}_{-5}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.2^{+8.3}_{-8.1}$	$D_{40}$	1229.2	$1231^{+22}_{-22}$	$f_{2000}^{143 \times 217}$	32.46	$32.6^{+3.5}_{-3.6}$
$A_{217}^{\text{dustTT}}$	81.8	$82^{+10}_{-10}$	$D_{220}$	5724	$5728^{+76}_{-75}$	$f_{2000}^{217}$	105.97	$106.2^{+3.7}_{-3.6}$
$A_{100}^{\text{dustEE}}$	0.0817	$0.082^{+0.011}_{-0.011}$	$D_{810}$	2533.6	$2534^{+27}_{-26}$	$\chi_{\text{lensing}}^2$	9.87	$10.6 (\nu: 2.1)$
$A_{100 \times 143}^{\text{dustEE}}$	0.0491	$0.0491^{+0.0096}_{-0.0097}$	$D_{1420}$	814.9	$814.7^{+9.4}_{-9.2}$	$\chi_{\text{lowl}}^2$	13.64	$13.82 (\nu: 0.3)$
$A_{100 \times 217}^{\text{dustEE}}$	0.0998	$0.0999^{+0.064}_{-0.063}$	$D_{2000}$	230.21	$230.1^{+3.1}_{-3.1}$	$\chi_{\text{plik}}^2$	2435.0	$2453.1 (\nu: 22.2)$
$A_{143}^{\text{dustEE}}$	0.1006	$0.100^{+0.014}_{-0.014}$	$n_{s,0.002}$	0.9666	$0.9661^{+0.0080}_{-0.0082}$	$\chi_{6\text{DF}}^2$	0.022	$0.054 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustEE}}$	0.225	$0.223^{+0.094}_{-0.091}$	$Y_{\text{P}}$	0.245358	$0.24535^{+0.00013}_{-0.00013}$	$\chi_{\text{MGS}}^2$	1.28	$1.34 (\nu: 0.1)$
$A_{217}^{\text{dustEE}}$	0.656	$0.65^{+0.25}_{-0.26}$	$Y_{\text{P}}^{\text{BBN}}$	0.246684	$0.24668^{+0.00013}_{-0.00013}$	$\chi_{\text{DR11CMass}}^2$	2.45	$2.81 (\nu: 0.2)$
$A_{100}^{\text{dustTE}}$	0.140	$0.140^{+0.073}_{-0.075}$	$10^5 \text{D}/\text{H}$	2.606	$2.608^{+0.053}_{-0.053}$	$\chi_{\text{DR11LOWZ}}^2$	0.61	$0.72 (\nu: 0.1)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.056}_{-0.057}$	$\text{Age}/\text{Gyr}$	13.8018	$13.803^{+0.043}_{-0.043}$	$\chi_{\text{prior}}^2$	7.1	$19.5 (\nu: 15.6)$
$A_{100 \times 217}^{\text{dustTE}}$	0.301	$0.30^{+0.16}_{-0.17}$	$z_*$	1089.927	$1089.94^{+0.48}_{-0.48}$	$\chi_{\text{CMB}}^2$	2458.5	$2477.4 (\nu: 20.7)$
$A_{143}^{\text{dustTE}}$	0.155	$0.15^{+0.11}_{-0.10}$	$r_*$	144.769	$144.77^{+0.48}_{-0.49}$	$\chi_{\text{BAO}}^2$	4.36	$4.92 (\nu: 0.3)$

Best-fit  $\chi_{\text{eff}}^2 = 2469.97$ ;  $\bar{\chi}_{\text{eff}}^2 = 2501.88$ ;  $R - 1 = 0.01338$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.02 MGS: 1.28 DR11CMass: 2.45 DR11LOWZ: 0.61 CMB - smica\_g30\_ftl\_full\_pp: 9.87 commander\_rc2\_v1.1\_l2\_29\_B: 13.64 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2434.99

## 2.62 base\_plikHM\_TTTEEE\_lowl\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022306	$0.02230^{+0.00028}_{-0.00028}$	$A_{217}^{\text{dustTE}}$	1.67	$1.67^{+0.51}_{-0.51}$	$z_{\text{drag}}$	1059.70	$1059.69^{+0.59}_{-0.59}$
$\Omega_c h^2$	0.11866	$0.1187^{+0.0021}_{-0.0021}$	$c_{100}$	0.99814	$0.9981^{+0.0016}_{-0.0015}$	$r_{\text{drag}}$	147.518	$147.51^{+0.48}_{-0.49}$
$100\theta_{\text{MC}}$	1.04095	$1.04092^{+0.00056}_{-0.00057}$	$c_{217}$	0.99606	$0.9960^{+0.0029}_{-0.0028}$	$k_D$	0.14037	$0.14038^{+0.00058}_{-0.00056}$
$\tau$	0.0683	$0.067^{+0.027}_{-0.029}$	$H_0$	67.78	$67.75^{+0.97}_{-0.96}$	$100\theta_D$	0.160895	$0.16089^{+0.00034}_{-0.00034}$
$\ln(10^{10} A_s)$	3.068	$3.066^{+0.052}_{-0.054}$	$\Omega_\Lambda$	0.6918	$0.691^{+0.013}_{-0.013}$	$z_{\text{eq}}$	3368.6	$3370^{+48}_{-46}$
$n_s$	0.9672	$0.9667^{+0.0081}_{-0.0080}$	$\Omega_m$	0.3082	$0.309^{+0.013}_{-0.013}$	$k_{\text{eq}}$	0.010281	$0.01029^{+0.00015}_{-0.00014}$
$y_{\text{cal}}$	1.00006	$1.0002^{+0.0049}_{-0.0048}$	$\Omega_m h^2$	0.14161	$0.1417^{+0.0020}_{-0.0019}$	$100\theta_{\text{eq}}$	0.8192	$0.8189^{+0.0090}_{-0.0090}$
$A_{217}^{\text{CIB}}$	68.0	$65^{+10}_{-10}$	$\Omega_m h^3$	0.09599	$0.09598^{+0.00057}_{-0.00057}$	$100\theta_{s,\text{eq}}$	0.45251	$0.4524^{+0.0046}_{-0.0046}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\sigma_8$	0.8172	$0.816^{+0.019}_{-0.020}$	$r_{\text{drag}}/D_V(0.57)$	0.07176	$0.07174^{+0.00072}_{-0.00071}$
$A_{143}^{\text{tSZ}}$	7.39	$5.3^{+3.7}_{-4.0}$	$\sigma_8 \Omega_m^{0.5}$	0.4537	$0.454^{+0.012}_{-0.012}$	$H(0.57)$	93.063	$93.05^{+0.44}_{-0.43}$
$A_{100}^{\text{PS}}$	256	$262^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6089	$0.608^{+0.014}_{-0.014}$	$D_A(0.57)$	1385.4	$1386^{+13}_{-13}$
$A_{143}^{\text{PS}}$	38.1	$43^{+10}_{-10}$	$\sigma_8/h^{0.5}$	0.9926	$0.992^{+0.022}_{-0.023}$	$F_{\text{AP}}(0.57)$	0.67520	$0.6753^{+0.0033}_{-0.0032}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.456	$2.456^{+0.053}_{-0.054}$	$f\sigma_8(0.57)$	0.4743	$0.474^{+0.011}_{-0.011}$
$A_{217}^{\text{PS}}$	96.0	$96^{+20}_{-20}$	$z_{\text{re}}$	9.04	$8.9^{+2.7}_{-2.8}$	$\sigma_8(0.57)$	0.6087	$0.608^{+0.015}_{-0.016}$
$A^{\text{kSZ}}$	0.0	—	$10^9 A_s$	2.149	$2.15^{+0.11}_{-0.11}$	$f_{2000}^{143}$	29.7	$30^{+5}_{-5}$
$A_{100}^{\text{dustTT}}$	7.45	$7.5^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8749	$1.876^{+0.022}_{-0.021}$	$f_{2000}^{143 \times 217}$	32.41	$32.5^{+3.5}_{-3.6}$
$A_{143}^{\text{dustTT}}$	9.03	$9.1^{+3.6}_{-3.6}$	$D_{40}$	1228.6	$1230^{+22}_{-22}$	$f_{2000}^{217}$	105.96	$106.1^{+3.6}_{-3.6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.2^{+8.3}_{-8.1}$	$D_{220}$	5725	$5729^{+76}_{-74}$	$\chi_{\text{lensing}}^2$	9.80	$10.5 (\nu: 2.1)$
$A_{217}^{\text{dustTT}}$	81.6	$82^{+10}_{-10}$	$D_{810}$	2532.9	$2533^{+27}_{-26}$	$\chi_{\text{lowl}}^2$	13.60	$13.76 (\nu: 0.3)$
$A_{100}^{\text{dustEE}}$	0.0814	$0.082^{+0.011}_{-0.011}$	$D_{1420}$	814.9	$814.8^{+9.4}_{-9.2}$	$\chi_{\text{plik}}^2$	2435.0	$2453.2 (\nu: 22.4)$
$A_{100 \times 143}^{\text{dustEE}}$	0.0491	$0.0492^{+0.0097}_{-0.0096}$	$D_{2000}$	230.24	$230.2^{+3.1}_{-3.0}$	$\chi_{\text{H070p6}}^2$	0.719	$0.75 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dustEE}}$	0.0998	$0.100^{+0.064}_{-0.063}$	$n_{s,0.002}$	0.9672	$0.9667^{+0.0081}_{-0.0080}$	$\chi_{\text{JLA}}^2$	706.662	$706.71 (\nu: 0.0)$
$A_{143}^{\text{dustEE}}$	0.1005	$0.100^{+0.014}_{-0.014}$	$Y_P$	0.245365	$0.24536^{+0.00013}_{-0.00013}$	$\chi_{6\text{DF}}^2$	0.010	$0.042 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustEE}}$	0.223	$0.223^{+0.094}_{-0.091}$	$Y_P^{\text{BBN}}$	0.246691	$0.24669^{+0.00013}_{-0.00013}$	$\chi_{\text{MGS}}^2$	1.41	$1.44 (\nu: 0.1)$
$A_{217}^{\text{dustEE}}$	0.647	$0.65^{+0.25}_{-0.26}$	$10^5 D/H$	2.603	$2.604^{+0.052}_{-0.053}$	$\chi_{\text{DR11CMass}}^2$	2.41	$2.75 (\nu: 0.1)$
$A_{100}^{\text{dustTE}}$	0.141	$0.140^{+0.073}_{-0.075}$	Age/Gyr	13.7975	$13.799^{+0.042}_{-0.043}$	$\chi_{\text{DR11LOWZ}}^2$	0.48	$0.61 (\nu: 0.1)$
$A_{100 \times 143}^{\text{dustTE}}$	0.130	$0.131^{+0.056}_{-0.057}$	$z_*$	1089.882	$1089.89^{+0.47}_{-0.46}$	$\chi_{\text{prior}}^2$	7.3	$19.5 (\nu: 15.6)$
$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.16}_{-0.17}$	$r_*$	144.829	$144.81^{+0.47}_{-0.48}$	$\chi_{\text{CMB}}^2$	2458.4	$2477.5 (\nu: 20.7)$
$A_{143}^{\text{dustTE}}$	0.152	$0.15^{+0.10}_{-0.11}$	$100\theta_*$	1.04114	$1.04111^{+0.00055}_{-0.00057}$	$\chi_{\text{BAO}}^2$	4.31	$4.84 (\nu: 0.3)$
$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.9106	$13.910^{+0.045}_{-0.046}$			

Best-fit  $\chi_{\text{eff}}^2 = 3177.41$ ;  $\bar{\chi}_{\text{eff}}^2 = 3209.31$ ;  $R - 1 = 0.01457$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.41 DR11LOWZ: 0.48 CMB - smica\_g30\_ftl\_full\_pp: 9.80 commander\_rc2.v1.1\_l2\_29\_B: 13.60 plik\_dx11dr2\_HM.v18\_TTTEEE:

## 2.63 base\_plikHM\_TTTEEE\_lowl\_lensing\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02228^{+0.00032}_{-0.00030}$	$A_{143}^{\text{dust}TE}$	$0.15^{+0.11}_{-0.10}$	$z_*$	$1089.96^{+0.57}_{-0.60}$
$\Omega_c h^2$	$0.1191^{+0.0028}_{-0.0029}$	$A_{143 \times 217}^{\text{dust}TE}$	$0.34^{+0.16}_{-0.16}$	$r_*$	$144.75^{+0.62}_{-0.60}$
$100\theta_{\text{MC}}$	$1.04088^{+0.00060}_{-0.00061}$	$A_{217}^{\text{dust}TE}$	$1.67^{+0.51}_{-0.51}$	$100\theta_*$	$1.04107^{+0.00059}_{-0.00060}$
$\tau$	$0.066^{+0.027}_{-0.025}$	$c_{100}$	$0.9981^{+0.0016}_{-0.0015}$	$D_A/\text{Gpc}$	$13.903^{+0.058}_{-0.057}$
$\ln(10^{10} A_s)$	$3.065^{+0.051}_{-0.047}$	$c_{217}$	$0.9961^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	$1059.65^{+0.63}_{-0.59}$
$n_s$	$0.9658^{+0.0097}_{-0.0092}$	$H_0$	$67.6^{+1.3}_{-1.2}$	$r_{\text{drag}}$	$147.44^{+0.60}_{-0.59}$
$y_{\text{cal}}$	$1.0001^{+0.0050}_{-0.0048}$	$\Omega_\Lambda$	$0.689^{+0.018}_{-0.017}$	$k_D$	$0.14042^{+0.00063}_{-0.00061}$
$A_{217}^{\text{CIB}}$	$65^{+10}_{-10}$	$\Omega_m$	$0.311^{+0.017}_{-0.018}$	$100\theta_D$	$0.16091^{+0.00035}_{-0.00035}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\Omega_m h^2$	$0.1420^{+0.0026}_{-0.0027}$	$z_{\text{eq}}$	$3378^{+63}_{-65}$
$A_{143}^{\text{tSZ}}$	$5.3^{+3.7}_{-4.0}$	$\Omega_m h^3$	$0.09597^{+0.00058}_{-0.00057}$	$k_{\text{eq}}$	$0.01031^{+0.00019}_{-0.00020}$
$A_{100}^{\text{PS}}$	$262^{+50}_{-50}$	$\sigma_8$	$0.817^{+0.018}_{-0.017}$	$100\theta_{\text{eq}}$	$0.817^{+0.013}_{-0.012}$
$A_{143}^{\text{PS}}$	$44^{+10}_{-10}$	$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.014}_{-0.013}$	$100\theta_{\text{s,eq}}$	$0.4516^{+0.0064}_{-0.0060}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.013}_{-0.013}$	$r_{\text{drag}}/D_V(0.57)$	$0.0716^{+0.0010}_{-0.00099}$
$A_{217}^{\text{PS}}$	$96^{+20}_{-20}$	$\sigma_8/h^{0.5}$	$0.994^{+0.021}_{-0.019}$	$H(0.57)$	$92.99^{+0.58}_{-0.57}$
$A^{\text{kSZ}}$	—	$\langle d^2 \rangle^{1/2}$	$2.460^{+0.050}_{-0.047}$	$D_A(0.57)$	$1388^{+17}_{-18}$
$A_{100}^{\text{dust}TT}$	$7.5^{+3.7}_{-3.7}$	$z_{\text{re}}$	$< 11.0$	$F_{\text{AP}}(0.57)$	$0.6759^{+0.0043}_{-0.0045}$
$A_{143}^{\text{dust}TT}$	$9.0^{+3.6}_{-3.5}$	$10^9 A_s$	$2.14^{+0.11}_{-0.10}$	$f\sigma_8(0.57)$	$0.475^{+0.010}_{-0.0094}$
$A_{143 \times 217}^{\text{dust}TT}$	$17.2^{+8.2}_{-8.1}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.023}_{-0.023}$	$\sigma_8(0.57)$	$0.608^{+0.015}_{-0.014}$
$A_{217}^{\text{dust}TT}$	$82^{+10}_{-10}$	$D_{40}$	$1232^{+23}_{-22}$	$f_{2000}^{143}$	$30^{+5}_{-5}$
$A_{100}^{\text{dust}EE}$	$0.082^{+0.011}_{-0.011}$	$D_{220}$	$5726^{+76}_{-74}$	$f_{2000}^{143 \times 217}$	$32.6^{+3.6}_{-3.7}$
$A_{100 \times 143}^{\text{dust}EE}$	$0.0491^{+0.0097}_{-0.0095}$	$D_{810}$	$2533^{+27}_{-26}$	$f_{2000}^{217}$	$106.1^{+3.8}_{-3.6}$
$A_{100 \times 217}^{\text{dust}EE}$	$0.100^{+0.065}_{-0.063}$	$D_{1420}$	$814.5^{+9.5}_{-9.3}$	$\chi^2_{\text{lensing}}$	$10.8 (\nu: 2.3)$
$A_{143}^{\text{dust}EE}$	$0.100^{+0.014}_{-0.014}$	$D_{2000}$	$230.0^{+3.2}_{-3.2}$	$\chi^2_{\text{lowl}}$	$13.91 (\nu: 0.4)$
$A_{143 \times 217}^{\text{dust}EE}$	$0.223^{+0.094}_{-0.090}$	$n_{\text{s},0.002}$	$0.9658^{+0.0097}_{-0.0092}$	$\chi^2_{\text{plik}}$	$2453.0 (\nu: 22.1)$
$A_{217}^{\text{dust}EE}$	$0.65^{+0.25}_{-0.26}$	$Y_{\text{P}}$	$0.24535^{+0.00014}_{-0.00014}$	$\chi^2_{\text{prior}}$	$19.5 (\nu: 15.5)$
$A_{100}^{\text{dust}TE}$	$0.140^{+0.073}_{-0.075}$	$Y_{\text{BBN}}$	$0.24668^{+0.00014}_{-0.00014}$	$\chi^2_{\text{CMB}}$	$2477.7 (\nu: 21.0)$
$A_{100 \times 143}^{\text{dust}TE}$	$0.131^{+0.056}_{-0.057}$	$10^5 \text{D/H}$	$2.609^{+0.058}_{-0.061}$		
$A_{100 \times 217}^{\text{dust}TE}$	$0.30^{+0.17}_{-0.17}$	$\text{Age/Gyr}$	$13.804^{+0.050}_{-0.053}$		

$$\bar{\chi}^2_{\text{eff}} = 2497.20; R - 1 = 0.01795$$



## 2.64 base\_plikHM\_TTTEEE\_lowl\_lensing\_post\_BAO\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02229^{+0.00028}_{-0.00027}$	$A_{143 \times 217}^{\text{dustTE}}$	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	$1.04110^{+0.00055}_{-0.00057}$
$\Omega_c h^2$	$0.1189^{+0.0021}_{-0.0021}$	$A_{217}^{\text{dustTE}}$	$1.67^{+0.51}_{-0.51}$	$D_A/\text{Gpc}$	$13.907^{+0.045}_{-0.046}$
$100\theta_{\text{MC}}$	$1.04090^{+0.00056}_{-0.00057}$	$c_{100}$	$0.9981^{+0.0016}_{-0.0015}$	$z_{\text{drag}}$	$1059.67^{+0.59}_{-0.60}$
$\tau$	$0.067^{+0.025}_{-0.024}$	$c_{217}$	$0.9960^{+0.0029}_{-0.0028}$	$r_{\text{drag}}$	$147.48^{+0.48}_{-0.49}$
$\ln(10^{10} A_s)$	$3.066^{+0.047}_{-0.045}$	$H_0$	$67.69^{+0.96}_{-0.94}$	$k_D$	$0.14039^{+0.00058}_{-0.00056}$
$n_s$	$0.9663^{+0.0079}_{-0.0078}$	$\Omega_\Lambda$	$0.690^{+0.013}_{-0.013}$	$100\theta_D$	$0.16090^{+0.00034}_{-0.00033}$
$y_{\text{cal}}$	$1.0001^{+0.0049}_{-0.0048}$	$\Omega_m$	$0.310^{+0.013}_{-0.013}$	$z_{\text{eq}}$	$3373^{+47}_{-46}$
$A_{217}^{\text{CIB}}$	$65^{+10}_{-10}$	$\Omega_m h^2$	$0.1418^{+0.0020}_{-0.0019}$	$k_{\text{eq}}$	$0.01029^{+0.00014}_{-0.00014}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\Omega_m h^3$	$0.09597^{+0.00057}_{-0.00057}$	$100\theta_{\text{eq}}$	$0.8184^{+0.0091}_{-0.0087}$
$A_{143}^{\text{tSZ}}$	$5.3^{+3.7}_{-4.0}$	$\sigma_8$	$0.817^{+0.018}_{-0.017}$	$100\theta_{\text{s,eq}}$	$0.4521^{+0.0046}_{-0.0045}$
$A_{100}^{\text{PS}}$	$262^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.012}_{-0.012}$	$r_{\text{drag}}/D_V(0.57)$	$0.07169^{+0.00072}_{-0.00069}$
$A_{143}^{\text{PS}}$	$43^{+10}_{-10}$	$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.013}_{-0.013}$	$H(0.57)$	$93.02^{+0.44}_{-0.42}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$\sigma_8/h^{0.5}$	$0.993^{+0.021}_{-0.020}$	$D_A(0.57)$	$1387^{+13}_{-13}$
$A_{217}^{\text{PS}}$	$96^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	$2.459^{+0.051}_{-0.048}$	$F_{\text{AP}}(0.57)$	$0.6755^{+0.0032}_{-0.0032}$
$A^{\text{kSZ}}$	—	$z_{\text{re}}$	$< 10.9$	$f\sigma_8(0.57)$	$0.474^{+0.010}_{-0.0094}$
$A_{100}^{\text{dustTT}}$	$7.5^{+3.7}_{-3.7}$	$10^9 A_s$	$2.15^{+0.10}_{-0.097}$	$\sigma_8(0.57)$	$0.608^{+0.014}_{-0.014}$
$A_{143}^{\text{dustTT}}$	$9.0^{+3.6}_{-3.5}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.021}_{-0.021}$	$f_{2000}^{143}$	$30^{+5}_{-5}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.2^{+8.3}_{-8.1}$	$D_{40}$	$1231^{+22}_{-22}$	$f_{2000}^{143 \times 217}$	$32.6^{+3.5}_{-3.6}$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$D_{220}$	$5727^{+76}_{-75}$	$f_{2000}^{217}$	$106.1^{+3.6}_{-3.5}$
$A_{100}^{\text{dustEE}}$	$0.082^{+0.011}_{-0.011}$	$D_{810}$	$2533^{+27}_{-26}$	$\chi_{\text{lensing}}^2$	$10.6 (\nu: 2.2)$
$A_{100 \times 143}^{\text{dustEE}}$	$0.0491^{+0.0096}_{-0.0096}$	$D_{1420}$	$814.6^{+9.4}_{-9.3}$	$\chi_{\text{lowl}}^2$	$13.83 (\nu: 0.3)$
$A_{100 \times 217}^{\text{dustEE}}$	$0.100^{+0.064}_{-0.063}$	$D_{2000}$	$230.1^{+3.1}_{-3.1}$	$\chi_{\text{plik}}^2$	$2452.8 (\nu: 21.9)$
$A_{143}^{\text{dustEE}}$	$0.100^{+0.014}_{-0.014}$	$n_{\text{s},0.002}$	$0.9663^{+0.0079}_{-0.0078}$	$\chi_{6\text{DF}}^2$	$0.047 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustEE}}$	$0.223^{+0.093}_{-0.091}$	$Y_{\text{P}}$	$0.24536^{+0.00012}_{-0.00013}$	$\chi_{\text{MGS}}^2$	$1.38 (\nu: 0.1)$
$A_{217}^{\text{dustEE}}$	$0.65^{+0.25}_{-0.26}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24668^{+0.00012}_{-0.00013}$	$\chi_{\text{DR11CMass}}^2$	$2.76 (\nu: 0.1)$
$A_{100}^{\text{dustTE}}$	$0.140^{+0.073}_{-0.075}$	$10^5 D/H$	$2.606^{+0.052}_{-0.052}$	$\chi_{\text{DR11LOWZ}}^2$	$0.67 (\nu: 0.1)$
$A_{100 \times 143}^{\text{dustTE}}$	$0.131^{+0.056}_{-0.057}$	$\text{Age/Gyr}$	$13.801^{+0.042}_{-0.043}$	$\chi_{\text{prior}}^2$	$19.5 (\nu: 15.6)$
$A_{100 \times 217}^{\text{dustTE}}$	$0.30^{+0.16}_{-0.17}$	$z_*$	$1089.92^{+0.47}_{-0.46}$	$\chi_{\text{CMB}}^2$	$2477.3 (\nu: 20.5)$
$A_{143}^{\text{dustTE}}$	$0.15^{+0.10}_{-0.11}$	$r_*$	$144.79^{+0.47}_{-0.48}$	$\chi_{\text{BAO}}^2$	$4.85 (\nu: 0.3)$

$$\bar{\chi}_{\text{eff}}^2 = 2501.68; R - 1 = 0.01627$$

## 2.65 base\_plikHM\_TTTEEE\_lowl\_lensing\_post\_reion

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022210	$0.02221^{+0.00029}_{-0.00029}$	$A_{143}^{\text{dust}TE}$	0.155	$0.16^{+0.11}_{-0.11}$	$z_*$	1090.12	$1090.11^{+0.50}_{-0.51}$
$\Omega_c h^2$	0.12002	$0.1199^{+0.0024}_{-0.0024}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.16}_{-0.16}$	$r_*$	144.55	$144.58^{+0.53}_{-0.53}$
$100\theta_{\text{MC}}$	1.04075	$1.04077^{+0.00058}_{-0.00059}$	$A_{217}^{\text{dust}TE}$	1.67	$1.68^{+0.52}_{-0.50}$	$100\theta_*$	1.04096	$1.04097^{+0.00057}_{-0.00058}$
$\tau$	0.0512	$0.054^{+0.014}_{-0.012}$	$c_{100}$	0.99817	$0.9981^{+0.0016}_{-0.0015}$	$D_A/\text{Gpc}$	13.886	$13.889^{+0.050}_{-0.051}$
$\ln(10^{10} A_s)$	3.0376	$3.043^{+0.028}_{-0.026}$	$c_{217}$	0.99612	$0.9961^{+0.0027}_{-0.0028}$	$z_{\text{drag}}$	1059.55	$1059.56^{+0.61}_{-0.58}$
$n_s$	0.9633	$0.9633^{+0.0082}_{-0.0080}$	$H_0$	67.16	$67.2^{+1.1}_{-1.0}$	$r_{\text{drag}}$	147.27	$147.29^{+0.54}_{-0.54}$
$y_{\text{cal}}$	1.00025	$1.0003^{+0.0051}_{-0.0048}$	$\Omega_\Lambda$	0.6832	$0.684^{+0.015}_{-0.014}$	$k_D$	0.14056	$0.14053^{+0.00060}_{-0.00058}$
$A_{217}^{\text{CIB}}$	68.2	$65^{+10}_{-10}$	$\Omega_m$	0.3168	$0.316^{+0.014}_{-0.015}$	$100\theta_D$	0.160957	$0.16096^{+0.00035}_{-0.00035}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m h^2$	0.14288	$0.1428^{+0.0022}_{-0.0022}$	$z_{\text{eq}}$	3399	$3396^{+53}_{-53}$
$A_{143}^{\text{tSZ}}$	7.27	$5.2^{+3.7}_{-4.0}$	$\Omega_m h^3$	0.09596	$0.09594^{+0.00057}_{-0.00057}$	$k_{\text{eq}}$	0.010374	$0.01037^{+0.00016}_{-0.00016}$
$A_{100}^{\text{PS}}$	259	$263^{+50}_{-50}$	$\sigma_8$	0.8086	$0.810^{+0.012}_{-0.011}$	$100\theta_{\text{eq}}$	0.8133	$0.814^{+0.010}_{-0.0098}$
$A_{143}^{\text{PS}}$	39.8	$44^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4551	$0.456^{+0.014}_{-0.014}$	$100\theta_{s,\text{eq}}$	0.4495	$0.4498^{+0.0052}_{-0.0050}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6066	$0.607^{+0.012}_{-0.012}$	$r_{\text{drag}}/D_V(0.57)$	0.07129	$0.07133^{+0.00081}_{-0.00075}$
$A_{217}^{\text{PS}}$	96.8	$96^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9866	$0.988^{+0.017}_{-0.017}$	$H(0.57)$	92.807	$92.83^{+0.48}_{-0.47}$
$A^{\text{kSZ}}$	0.0	—	$\langle d^2 \rangle^{1/2}$	2.4419	$2.447^{+0.042}_{-0.042}$	$D_A(0.57)$	1393.7	$1393^{+14}_{-15}$
$A_{100}^{\text{dust}TT}$	7.43	$7.5^{+3.7}_{-3.7}$	$z_{\text{re}}$	7.40	$< 8.91$	$F_{\text{AP}}(0.57)$	0.67736	$0.6772^{+0.0036}_{-0.0037}$
$A_{143}^{\text{dust}TT}$	9.06	$9.0^{+3.6}_{-3.5}$	$10^9 A_s$	2.085	$2.096^{+0.059}_{-0.055}$	$f\sigma_8(0.57)$	0.4714	$0.4722^{+0.0083}_{-0.0084}$
$A_{143 \times 217}^{\text{dust}TT}$	17.8	$17.3^{+8.2}_{-8.0}$	$10^9 A_s e^{-2\tau}$	1.8824	$1.882^{+0.022}_{-0.021}$	$\sigma_8(0.57)$	0.6002	$0.6016^{+0.0085}_{-0.0080}$
$A_{217}^{\text{dust}TT}$	82.1	$82^{+10}_{-10}$	$D_{40}$	1232.8	$1234^{+23}_{-23}$	$f_{2000}^{143}$	30.4	$31^{+5}_{-5}$
$A_{100}^{\text{dust}EE}$	0.0810	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5726	$5728^{+75}_{-74}$	$f_{2000}^{143 \times 217}$	33.00	$33.1^{+3.6}_{-3.6}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0487	$0.0488^{+0.0097}_{-0.0096}$	$D_{810}$	2536.6	$2536^{+26}_{-26}$	$f_{2000}^{217}$	106.49	$106.6^{+3.7}_{-3.5}$
$A_{100 \times 217}^{\text{dust}EE}$	0.0999	$0.100^{+0.065}_{-0.063}$	$D_{1420}$	815.0	$814.7^{+9.4}_{-9.5}$	$\chi^2_{\text{lensing}}$	9.20	$9.9 (\nu: 0.9)$
$A_{143}^{\text{dust}EE}$	0.1001	$0.100^{+0.014}_{-0.013}$	$D_{2000}$	229.81	$229.8^{+3.1}_{-3.2}$	$\chi^2_{\text{lowl}}$	13.81	$13.96 (\nu: 0.4)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.223^{+0.094}_{-0.091}$	$n_{s,0.002}$	0.9633	$0.9633^{+0.0082}_{-0.0080}$	$\chi^2_{\text{plik}}$	2436.1	$2453.7 (\nu: 21.3)$
$A_{217}^{\text{dust}EE}$	0.648	$0.65^{+0.25}_{-0.26}$	$Y_P$	0.245322	$0.24532^{+0.00013}_{-0.00014}$	$\chi^2_{\text{prior}}$	7.1	$20 (\nu: 16.4)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.072}_{-0.075}$	$Y_P^{\text{BBN}}$	0.246648	$0.24665^{+0.00013}_{-0.00014}$	$\chi^2_{\text{CMB}}$	2459.1	$2477.6 (\nu: 20.9)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.056}_{-0.056}$	$10^5 \text{D}/\text{H}$	2.622	$2.621^{+0.056}_{-0.055}$			
$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.17}_{-0.17}$	$\text{Age}/\text{Gyr}$	13.8186	$13.817^{+0.044}_{-0.045}$			

Best-fit  $\chi^2_{\text{eff}} = 2466.21$ ;  $\bar{\chi}^2_{\text{eff}} = 2497.92$ ;  $R - 1 = 0.02919$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.20 commander\_rc2\_v1.1.l2\_29\_B: 13.80 plik\_dx11dr2\_HM\_v18.TTTEEE: 2436.06

## 2.66 base\_CamSpecHM\_TT\_lowl\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02225	$0.02232^{+0.00052}_{-0.00052}$ (+0.1 $\sigma$ )	$H_0$	67.93	$68.2^{+2.4}_{-2.3}$ (+0.2 $\sigma$ )	$100\theta_*$	1.04129	$1.04135^{+0.00098}_{-0.0010}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	0.1183	$0.1178^{+0.0050}_{-0.0051}$ (-0.2 $\sigma$ )	$\Omega_\Lambda$	0.6941	$0.696^{+0.030}_{-0.031}$ (+0.2 $\sigma$ )	$z_{\text{drag}}$	1059.51	$1059.64^{+0.98}_{-0.96}$ (+0.1 $\sigma$ )
$100\theta_{\text{MC}}$	1.04107	$1.0411^{+0.0010}_{-0.0010}$ (+0.1 $\sigma$ )	$\Omega_m$	0.3059	$0.304^{+0.031}_{-0.030}$ (-0.2 $\sigma$ )	$r_{\text{drag}}$	147.69	$147.7^{+1.0}_{-1.0}$ (+0.1 $\sigma$ )
$\tau$	0.0710	$0.076^{+0.049}_{-0.048}$ (+0.3 $\sigma$ )	$\Omega_m h^2$	0.14115	$0.1408^{+0.0046}_{-0.0047}$ (-0.1 $\sigma$ )	$k_D$	0.14017	$0.1402^{+0.0010}_{-0.00099}$ (-0.0 $\sigma$ )
$\ln(10^{10} A_s)$	3.071	$3.079^{+0.087}_{-0.085}$ (+0.2 $\sigma$ )	$\Omega_m h^3$	0.09588	$0.09595^{+0.00086}_{-0.00088}$ (+0.1 $\sigma$ )	$100\theta_D$	0.16098	$0.16092^{+0.00056}_{-0.00054}$ (-0.2 $\sigma$ )
$n_s$	0.9694	$0.971^{+0.015}_{-0.014}$ (+0.4 $\sigma$ )	$\sigma_8$	0.8181	$0.820^{+0.025}_{-0.025}$ (+0.3 $\sigma$ )	$z_{\text{eq}}$	3358	$3349^{+110}_{-110}$ (-0.1 $\sigma$ )
$y_{\text{cal}}$	1.00053	$1.0000^{+0.0049}_{-0.0048}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4525	$0.452^{+0.018}_{-0.018}$ (+0.0 $\sigma$ )	$100\theta_{\text{eq}}$	0.8211	$0.823^{+0.023}_{-0.021}$ (+0.2 $\sigma$ )
$A_{100}^{\text{PS}}$	251.1	$246^{+40}_{-50}$ (-0.5 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6084	$0.609^{+0.015}_{-0.015}$ (+0.2 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07191	$0.0721^{+0.0018}_{-0.0017}$ (+0.2 $\sigma$ )
$A_{143}^{\text{PS}}$	35.0	$38^{+20}_{-20}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	0.9926	$0.994^{+0.024}_{-0.024}$ (+0.2 $\sigma$ )	$H(0.57)$	93.10	$93.2^{+1.1}_{-0.98}$ (+0.2 $\sigma$ )
$A_{217}^{\text{PS}}$	94.4	$97^{+30}_{-30}$ (+0.1 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.451	$2.452^{+0.056}_{-0.057}$ (+0.1 $\sigma$ )	$D_A(0.57)$	1383.7	$1381^{+31}_{-32}$ (-0.2 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.4	$46^{+10}_{-10}$ (-2.7 $\sigma$ )	$z_{\text{re}}$	9.31	$9.6^{+4.3}_{-4.6}$ (+0.3 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6746	$0.6739^{+0.0079}_{-0.0078}$ (-0.2 $\sigma$ )
$A_{143}^{\text{tSZ}}$	2.77	$< 6.64$ (-1.0 $\sigma$ )	$10^9 A_s$	2.155	$2.18^{+0.19}_{-0.19}$ (+0.2 $\sigma$ )	$f\sigma_8(0.57)$	0.4742	$0.475^{+0.011}_{-0.012}$ (+0.2 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.396	$0.51^{+0.23}_{-0.21}$	$10^9 A_s e^{-2\tau}$	1.8699	$1.867^{+0.030}_{-0.029}$ (-0.4 $\sigma$ )	$\sigma_8(0.57)$	0.6099	$0.612^{+0.025}_{-0.024}$ (+0.3 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1221.5	$1220^{+25}_{-25}$ (-0.5 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246251	$0.24628^{+0.00022}_{-0.00023}$ (-3.4 $\sigma$ )
$A^{\text{kSZ}}$	6.2	—	$D_{220}$	5703	$5698^{+79}_{-78}$ (-0.5 $\sigma$ )	$f_{2000}^{143}$	29.7	$29^{+6}_{-6}$ (-0.5 $\sigma$ )
$A_{100}^{\text{dust}}$	0.977	$0.99^{+0.37}_{-0.38}$	$D_{810}$	2529.1	$2527^{+28}_{-27}$ (-0.3 $\sigma$ )	$f_{2000}^{217}$	107.09	$106.3^{+4.2}_{-4.3}$ (+0.1 $\sigma$ )
$A_{143}^{\text{dust}}$	1.009	$1.03^{+0.35}_{-0.36}$	$D_{1420}$	814.3	$814^{+10}_{-10}$ (-0.0 $\sigma$ )	$f_{2000}^{143 \times 217}$	32.11	$32^{+4}_{-5}$ (-0.5 $\sigma$ )
$A_{217}^{\text{dust}}$	1.222	$1.21^{+0.23}_{-0.23}$	$n_{s,0.002}$	0.9694	$0.971^{+0.015}_{-0.014}$ (+0.4 $\sigma$ )	$\chi_{\text{lensing}}^2$	9.15	$10.1 (\nu: 1.6)$ (+0.0 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.938	$0.98^{+0.35}_{-0.35}$	$Y_{\text{P}}$	0.244921	$0.24495^{+0.00022}_{-0.00022}$ (-3.4 $\sigma$ )	$\chi_{\text{lowl}}^2$	13.05	$13.08 (\nu: 0.4)$ (-0.5 $\sigma$ )
$c_{100}$	0.99666	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	Age/Gyr	13.797	$13.786^{+0.089}_{-0.092}$ (-0.2 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	8046.7	$8061.4 (\nu: 16.9)$
$c_{217}$	0.99756	$0.9973^{+0.0035}_{-0.0034}$ (+0.9 $\sigma$ )	$z_*$	1089.90	$1089.8^{+1.0}_{-1.0}$ (-0.2 $\sigma$ )	$\chi_{\text{CMB}}^2$	8068.9	$8084.6 (\nu: 16.4)$ (+1321.5 $\sigma$ )
$\beta_1^1$	-0.15	$-0.1^{+1.9}_{-2.0}$	$r_*$	144.97	$145.0^{+1.1}_{-1.0}$ (+0.1 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 8072.73$ ;  $\Delta\chi_{\text{eff}}^2 = 7281.92$ ;  $\bar{\chi}_{\text{eff}}^2 = 8093.05$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7282.22$ ;  $R - 1 = 0.00662$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.15 ( $\Delta$  -0.22) commander\_rc2\_v1.1\_l2\_29\_B: 13.05 ( $\Delta$  -0.24) CamSpec like\_v9.10CMH\_unified: 8046.71

## 2.67 base\_CamSpecHM\_TT\_lowl\_lensing\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02227^{+0.00039}_{-0.00039} (+0.0\sigma)$	$\Omega_m$	$0.307^{+0.016}_{-0.015} (-0.1\sigma)$	$100\theta_D$	$0.16096^{+0.00051}_{-0.00049} (-0.1\sigma)$
$\Omega_c h^2$	$0.1185^{+0.0026}_{-0.0026} (-0.1\sigma)$	$\Omega_m h^2$	$0.1414^{+0.0025}_{-0.0024} (-0.1\sigma)$	$z_{\text{eq}}$	$3363^{+59}_{-58} (-0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04107^{+0.00084}_{-0.00084} (+0.1\sigma)$	$\Omega_m h^3$	$0.09593^{+0.00089}_{-0.00087} (+0.0\sigma)$	$100\theta_{\text{eq}}$	$0.820^{+0.011}_{-0.011} (+0.1\sigma)$
$\tau$	$0.071^{+0.032}_{-0.032} (+0.2\sigma)$	$\sigma_8$	$0.818^{+0.021}_{-0.021} (+0.2\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07185^{+0.00089}_{-0.00086} (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.069^{+0.058}_{-0.060} (+0.2\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.013}_{-0.013} (+0.2\sigma)$	$H(0.57)$	$93.09^{+0.58}_{-0.56} (+0.1\sigma)$
$n_s$	$0.9697^{+0.0094}_{-0.0093} (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.015}_{-0.015} (+0.2\sigma)$	$D_A(0.57)$	$1384^{+16}_{-16} (-0.1\sigma)$
$y_{\text{cal}}$	$1.0000^{+0.0049}_{-0.0048} (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.993^{+0.024}_{-0.024} (+0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6749^{+0.0039}_{-0.0039} (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-40} (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.451^{+0.056}_{-0.057} (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.475^{+0.012}_{-0.012} (+0.2\sigma)$
$A_{143}^{\text{PS}}$	$39^{+10}_{-10} (-0.6\sigma)$	$z_{\text{re}}$	$9.2^{+2.7}_{-3.1} (+0.2\sigma)$	$\sigma_8(0.57)$	$0.610^{+0.017}_{-0.018} (+0.2\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} (+0.0\sigma)$	$10^9 A_s$	$2.15^{+0.13}_{-0.13} (+0.2\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24626^{+0.00017}_{-0.00017} (-4.4\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.023}_{-0.023} (-0.4\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-6} (-0.5\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.56 (-1.0\sigma)$	$D_{40}$	$1220^{+22}_{-22} (-0.5\sigma)$	$f_{2000}^{217}$	$106.6^{+4.0}_{-3.8} (+0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.20}$	$D_{220}$	$5696^{+76}_{-77} (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2528^{+28}_{-27} (-0.3\sigma)$	$\chi_{\text{lensing}}^2$	$10.1 (\nu: 1.6) (+0.0\sigma)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$814.1^{+9.9}_{-10} (-0.0\sigma)$	$\chi_{\text{lowl}}^2$	$13.11 (\nu: 0.3) (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.37}$	$n_{\text{s},0.002}$	$0.9697^{+0.0094}_{-0.0093} (+0.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$8060.7 (\nu: 15.8)$
$A_{143}^{\text{dust}}$	$1.03^{+0.35}_{-0.37}$	$Y_{\text{P}}$	$0.24493^{+0.00017}_{-0.00016} (-4.4\sigma)$	$\chi_{6\text{DF}}^2$	$0.048 (\nu: 0.0) (-0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.22}$	$\text{Age/Gyr}$	$13.797^{+0.059}_{-0.058} (-0.1\sigma)$	$\chi_{\text{MGS}}^2$	$1.60 (\nu: 0.2) (+0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.34}_{-0.35}$	$z_*$	$1089.90^{+0.62}_{-0.61} (-0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.90 (\nu: 0.3) (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	$r_*$	$144.91^{+0.62}_{-0.64} (+0.0\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.53 (\nu: 0.1) (-0.1\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0035} (+0.9\sigma)$	$100\theta_*$	$1.04127^{+0.00082}_{-0.00084} (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.4 (\nu: 6.0) (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$z_{\text{drag}}$	$1059.57^{+0.86}_{-0.86} (+0.0\sigma)$	$\chi_{\text{CMB}}^2$	$8083.9 (\nu: 15.6) (+1353.0\sigma)$
$H_0$	$67.9^{+1.2}_{-1.2} (+0.1\sigma)$	$r_{\text{drag}}$	$147.62^{+0.66}_{-0.69} (+0.0\sigma)$	$\chi_{\text{BAO}}^2$	$5.1 (\nu: 0.6) (-0.0\sigma)$
$\Omega_\Lambda$	$0.693^{+0.015}_{-0.016} (+0.1\sigma)$	$k_D$	$0.14025^{+0.00084}_{-0.00083} (+0.0\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 8097.42; \Delta \bar{\chi}_{\text{eff}}^2 = 7282.15; R - 1 = 0.01123$$

## 2.68 base\_CamSpecHM\_TT\_lowl\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02229^{+0.00039}_{-0.00039} (+0.0\sigma)$	$\Omega_m h^2$	$0.1411^{+0.0024}_{-0.0024} (-0.0\sigma)$	$100\theta_{\text{eq}}$	$0.821^{+0.011}_{-0.011} (+0.1\sigma)$
$\Omega_c h^2$	$0.1182^{+0.0025}_{-0.0025} (-0.1\sigma)$	$\Omega_m h^3$	$0.09595^{+0.00088}_{-0.00085} (+0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07195^{+0.00086}_{-0.00084} (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04111^{+0.00083}_{-0.00085} (+0.1\sigma)$	$\sigma_8$	$0.819^{+0.021}_{-0.022} (+0.2\sigma)$	$H(0.57)$	$93.15^{+0.56}_{-0.55} (+0.1\sigma)$
$\tau$	$0.073^{+0.031}_{-0.032} (+0.2\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.013}_{-0.013} (+0.2\sigma)$	$D_A(0.57)$	$1383^{+15}_{-16} (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.073^{+0.057}_{-0.059} (+0.2\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.015}_{-0.015} (+0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6744^{+0.0038}_{-0.0038} (-0.1\sigma)$
$n_s$	$0.9704^{+0.0093}_{-0.0089} (+0.4\sigma)$	$\sigma_8/h^{0.5}$	$0.993^{+0.024}_{-0.024} (+0.2\sigma)$	$f\sigma_8(0.57)$	$0.475^{+0.012}_{-0.012} (+0.2\sigma)$
$y_{\text{cal}}$	$1.0000^{+0.0049}_{-0.0048} (-0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.452^{+0.056}_{-0.057} (+0.1\sigma)$	$\sigma_8(0.57)$	$0.611^{+0.017}_{-0.018} (+0.2\sigma)$
$A_{100}^{\text{PS}}$	$246^{+40}_{-40} (-0.5\sigma)$	$z_{\text{re}}$	$9.4^{+2.9}_{-3.1} (+0.2\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24627^{+0.00016}_{-0.00017} (-4.5\sigma)$
$A_{143}^{\text{PS}}$	$39^{+10}_{-10} (-0.6\sigma)$	$10^9 A_s$	$2.16^{+0.13}_{-0.12} (+0.2\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} (-0.5\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} (+0.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.868^{+0.023}_{-0.022} (-0.4\sigma)$	$f_{2000}^{217}$	$106.4^{+3.9}_{-3.7} (+0.1\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} (-2.7\sigma)$	$D_{40}$	$1220^{+22}_{-22} (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.62 (-1.0\sigma)$	$D_{220}$	$5697^{+77}_{-77} (-0.5\sigma)$	$\chi_{\text{lensing}}^2$	$10.2 (\nu: 1.6) (+0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.20}$	$D_{810}$	$2528^{+27}_{-27} (-0.3\sigma)$	$\chi_{\text{lowl}}^2$	$13.06 (\nu: 0.3) (-0.5\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{1420}$	$814^{+10}_{-9.9} (-0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8060.7 (\nu: 15.9)$
$A^{\text{kSZ}}$	—	$n_{s,0.002}$	$0.9704^{+0.0093}_{-0.0089} (+0.4\sigma)$	$\chi_{\text{H070p6}}^2$	$0.65 (\nu: 0.0) (-0.1\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$Y_{\text{P}}$	$0.24494^{+0.00017}_{-0.00016} (-4.5\sigma)$	$\chi_{\text{JLA}}^2$	$706.65 (\nu: 0.0) (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.35}_{-0.36}$	$\text{Age/Gyr}$	$13.792^{+0.059}_{-0.057} (-0.1\sigma)$	$\chi_{6\text{DF}}^2$	$0.042 (\nu: 0.0) (-0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.22}$	$z_*$	$1089.84^{+0.61}_{-0.60} (-0.1\sigma)$	$\chi_{\text{MGS}}^2$	$1.73 (\nu: 0.2) (+0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.34}_{-0.36}$	$r_*$	$144.96^{+0.61}_{-0.62} (+0.0\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.92 (\nu: 0.3) (+0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0018} (-1.4\sigma)$	$100\theta_*$	$1.04131^{+0.00082}_{-0.00084} (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.43 (\nu: 0.1) (-0.1\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0035} (+0.9\sigma)$	$z_{\text{drag}}$	$1059.61^{+0.88}_{-0.85} (+0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.4 (\nu: 6.0) (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_{\text{drag}}$	$147.66^{+0.64}_{-0.66} (+0.0\sigma)$	$\chi_{\text{CMB}}^2$	$8083.9 (\nu: 15.6) (+1354.6\sigma)$
$H_0$	$68.0^{+1.2}_{-1.1} (+0.1\sigma)$	$k_{\text{D}}$	$0.14022^{+0.00084}_{-0.00082} (+0.0\sigma)$	$\chi_{\text{BAO}}^2$	$5.1 (\nu: 0.6) (+0.0\sigma)$
$\Omega_\Lambda$	$0.695^{+0.015}_{-0.015} (+0.1\sigma)$	$100\theta_{\text{D}}$	$0.16094^{+0.00050}_{-0.00049} (-0.1\sigma)$		
$\Omega_m$	$0.305^{+0.015}_{-0.015} (-0.1\sigma)$	$z_{\text{eq}}$	$3357^{+57}_{-56} (-0.0\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 8804.72; \Delta \bar{\chi}_{\text{eff}}^2 = 7282.16; R - 1 = 0.01143$$

## 2.69 base\_CamSpecHM\_TT\_lowl\_lensing\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00050}_{-0.00046} \quad (+0.1\sigma)$	$H_0$	$68.3^{+2.2}_{-2.1} \quad (+0.1\sigma)$	$100\theta_*$	$1.04140^{+0.00094}_{-0.00095} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1175^{+0.0044}_{-0.0047} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.699^{+0.028}_{-0.027} \quad (+0.1\sigma)$	$z_{\text{drag}}$	$1059.68^{+0.94}_{-0.92} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04120^{+0.00096}_{-0.00097} \quad (+0.1\sigma)$	$\Omega_m$	$0.301^{+0.027}_{-0.028} \quad (-0.1\sigma)$	$r_{\text{drag}}$	$147.79^{+0.96}_{-0.91} \quad (+0.1\sigma)$
$\tau$	$< 0.118 \quad (+0.2\sigma)$	$\Omega_m h^2$	$0.1405^{+0.0041}_{-0.0043} \quad (-0.1\sigma)$	$k_D$	$0.14012^{+0.00097}_{-0.00096} \quad (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.086^{+0.074}_{-0.070} \quad (+0.2\sigma)$	$\Omega_m h^3$	$0.09597^{+0.00086}_{-0.00086} \quad (+0.1\sigma)$	$100\theta_D$	$0.16091^{+0.00054}_{-0.00053} \quad (-0.1\sigma)$
$n_s$	$0.972^{+0.014}_{-0.013} \quad (+0.4\sigma)$	$\sigma_8$	$0.822^{+0.023}_{-0.022} \quad (+0.3\sigma)$	$z_{\text{eq}}$	$3341^{+99}_{-100} \quad (-0.1\sigma)$
$y_{\text{cal}}$	$1.0000^{+0.0049}_{-0.0047} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.017}_{-0.017} \quad (+0.0\sigma)$	$100\theta_{\text{eq}}$	$0.825^{+0.021}_{-0.019} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.015}_{-0.015} \quad (+0.2\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0722^{+0.0017}_{-0.0016} \quad (+0.1\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.995^{+0.023}_{-0.023} \quad (+0.2\sigma)$	$H(0.57)$	$93.29^{+0.99}_{-0.92} \quad (+0.1\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.455^{+0.054}_{-0.052} \quad (+0.0\sigma)$	$D_A(0.57)$	$1378^{+27}_{-29} \quad (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$z_{\text{re}}$	$< 13.0 \quad (+0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6734^{+0.0069}_{-0.0073} \quad (-0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.63 \quad (-1.0\sigma)$	$10^9 A_s$	$2.19^{+0.17}_{-0.15} \quad (+0.2\sigma)$	$f\sigma_8(0.57)$	$0.475^{+0.011}_{-0.011} \quad (+0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.21}$	$10^9 A_s e^{-2\tau}$	$1.865^{+0.027}_{-0.028} \quad (-0.3\sigma)$	$\sigma_8(0.57)$	$0.614^{+0.021}_{-0.020} \quad (+0.2\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1218^{+24}_{-24} \quad (-0.5\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24629^{+0.00021}_{-0.00020} \quad (-3.7\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5698^{+78}_{-78} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$D_{810}$	$2526^{+27}_{-26} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$106.1^{+4.1}_{-4.1} \quad (+0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.35}_{-0.36}$	$D_{1420}$	$815^{+10}_{-10} \quad (-0.0\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$n_{\text{s},0.002}$	$0.972^{+0.014}_{-0.013} \quad (+0.4\sigma)$	$\chi_{\text{lensing}}^2$	$10.2 \quad (\nu: 1.8) \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.34}_{-0.36}$	$Y_{\text{P}}$	$0.24496^{+0.00021}_{-0.00019} \quad (-3.7\sigma)$	$\chi_{\text{lowl}}^2$	$13.02 \quad (\nu: 0.3) \quad (-0.5\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0018} \quad (-1.4\sigma)$	$\text{Age/Gyr}$	$13.780^{+0.079}_{-0.088} \quad (-0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.2 \quad (\nu: 16.7)$
$c_{217}$	$0.9972^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$z_*$	$1089.72^{+0.91}_{-0.95} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.0) \quad (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_*$	$145.1^{+1.0}_{-0.98} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$8084.4 \quad (\nu: 16.2) \quad (+1328.4\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 8092.86; \Delta \bar{\chi}_{\text{eff}}^2 = 7282.26; R - 1 = 0.00707$$

## 2.70 base\_CamSpecHM\_TT\_lowl\_lensing\_post\_BAO\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02227^{+0.00039}_{-0.00039} (+0.0\sigma)$	$\Omega_m$	$0.307^{+0.015}_{-0.015} (-0.0\sigma)$	$100\theta_D$	$0.16095^{+0.00051}_{-0.00049} (-0.1\sigma)$
$\Omega_c h^2$	$0.1184^{+0.0024}_{-0.0025} (-0.0\sigma)$	$\Omega_m h^2$	$0.1413^{+0.0023}_{-0.0024} (-0.0\sigma)$	$z_{eq}$	$3361^{+56}_{-58} (-0.0\sigma)$
$100\theta_{MC}$	$1.04108^{+0.00083}_{-0.00084} (+0.1\sigma)$	$\Omega_m h^3$	$0.09594^{+0.00089}_{-0.00086} (+0.0\sigma)$	$100\theta_{eq}$	$0.821^{+0.011}_{-0.010} (+0.0\sigma)$
$\tau$	$0.072^{+0.028}_{-0.028} (+0.2\sigma)$	$\sigma_8$	$0.819^{+0.020}_{-0.020} (+0.2\sigma)$	$r_{drag}/D_V(0.57)$	$0.07188^{+0.00088}_{-0.00082} (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.072^{+0.054}_{-0.053} (+0.2\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.013}_{-0.013} (+0.1\sigma)$	$H(0.57)$	$93.10^{+0.57}_{-0.54} (+0.1\sigma)$
$n_s$	$0.9699^{+0.0092}_{-0.0088} (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.015}_{-0.014} (+0.2\sigma)$	$D_A(0.57)$	$1384^{+15}_{-16} (-0.1\sigma)$
$y_{cal}$	$1.0000^{+0.0049}_{-0.0048} (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.994^{+0.023}_{-0.022} (+0.2\sigma)$	$F_{AP}(0.57)$	$0.6748^{+0.0037}_{-0.0039} (-0.0\sigma)$
$A_{100}^{PS}$	$247^{+40}_{-40} (-0.4\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.454^{+0.054}_{-0.051} (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.475^{+0.011}_{-0.011} (+0.2\sigma)$
$A_{143}^{PS}$	$39^{+10}_{-10} (-0.6\sigma)$	$z_{re}$	$9.4^{+2.3}_{-2.8} (+0.2\sigma)$	$\sigma_8(0.57)$	$0.611^{+0.016}_{-0.016} (+0.2\sigma)$
$A_{217}^{PS}$	$97^{+30}_{-30} (+0.1\sigma)$	$10^9 A_s$	$2.16^{+0.12}_{-0.11} (+0.2\sigma)$	$Y_P^{BBN}$	$0.24626^{+0.00016}_{-0.00017} (-4.5\sigma)$
$A_{217}^{CIB}$	$47^{+10}_{-10} (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.023}_{-0.022} (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} (-0.4\sigma)$
$A_{143}^{tSZ}$	$< 6.56 (-1.0\sigma)$	$D_{40}$	$1220^{+22}_{-22} (-0.5\sigma)$	$f_{2000}^{217}$	$106.5^{+3.9}_{-3.7} (+0.1\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.22}_{-0.21}$	$D_{220}$	$5695^{+76}_{-77} (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} (-0.4\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{810}$	$2528^{+27}_{-27} (-0.3\sigma)$	$\chi_{lensing}^2$	$10.2 (\nu: 1.6) (+0.0\sigma)$
$A^{kSZ}$	—	$D_{1420}$	$814^{+10}_{-10} (-0.0\sigma)$	$\chi_{lowl}^2$	$13.11 (\nu: 0.3) (-0.5\sigma)$
$A_{100}^{dust}$	$0.99^{+0.37}_{-0.38}$	$n_{s,0.002}$	$0.9699^{+0.0092}_{-0.0088} (+0.4\sigma)$	$\chi_{CamSpec}^2$	$8060.5 (\nu: 15.5)$
$A_{143}^{dust}$	$1.03^{+0.35}_{-0.37}$	$Y_P$	$0.24493^{+0.00017}_{-0.00016} (-4.5\sigma)$	$\chi_{6DF}^2$	$0.044 (\nu: 0.0) (-0.0\sigma)$
$A_{217}^{dust}$	$1.21^{+0.22}_{-0.22}$	$Age/Gyr$	$13.795^{+0.058}_{-0.058} (-0.1\sigma)$	$\chi_{MGS}^2$	$1.63 (\nu: 0.2) (+0.0\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.34}_{-0.36}$	$z_*$	$1089.88^{+0.61}_{-0.60} (-0.1\sigma)$	$\chi_{DR11CMass}^2$	$2.88 (\nu: 0.2) (+0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	$r_*$	$144.93^{+0.61}_{-0.62} (+0.0\sigma)$	$\chi_{DR11LOWZ}^2$	$0.50 (\nu: 0.1) (-0.0\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0035} (+0.9\sigma)$	$100\theta_*$	$1.04129^{+0.00081}_{-0.00083} (+0.1\sigma)$	$\chi_{prior}^2$	$8.4 (\nu: 6.0) (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$z_{drag}$	$1059.58^{+0.86}_{-0.86} (-0.0\sigma)$	$\chi_{CMB}^2$	$8083.8 (\nu: 15.2) (+1365.5\sigma)$
$H_0$	$67.9^{+1.2}_{-1.1} (+0.0\sigma)$	$r_{drag}$	$147.63^{+0.65}_{-0.67} (+0.0\sigma)$	$\chi_{BAO}^2$	$5.1 (\nu: 0.5) (+0.0\sigma)$
$\Omega_\Lambda$	$0.693^{+0.015}_{-0.015} (+0.0\sigma)$	$k_D$	$0.14024^{+0.00084}_{-0.00082} (+0.0\sigma)$		

$$\bar{\chi}_{eff}^2 = 8097.25; \Delta \bar{\chi}_{eff}^2 = 7282.20; R - 1 = 0.01213$$

## 2.71 base\_CamSpecHM\_TT\_lowl\_lensing\_post\_reion

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02218^{+0.00040}_{-0.00042} \quad (+0.0\sigma)$	$H_0$	$67.3^{+1.3}_{-1.3} \quad (-0.0\sigma)$	$100\theta_*$	$1.04109^{+0.00086}_{-0.00084} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1197^{+0.0029}_{-0.0029} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.685^{+0.017}_{-0.018} \quad (-0.0\sigma)$	$z_{\text{drag}}$	$1059.45^{+0.87}_{-0.92} \quad (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04088^{+0.00087}_{-0.00085} \quad (+0.0\sigma)$	$\Omega_m$	$0.315^{+0.018}_{-0.017} \quad (+0.0\sigma)$	$r_{\text{drag}}$	$147.38^{+0.72}_{-0.71} \quad (-0.1\sigma)$
$\tau$	$< 0.0685 \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1425^{+0.0028}_{-0.0028} \quad (+0.1\sigma)$	$k_D$	$0.14043^{+0.00086}_{-0.00090} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.041^{+0.030}_{-0.027} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.09590^{+0.00088}_{-0.00091} \quad (+0.1\sigma)$	$100\theta_D$	$0.16101^{+0.00053}_{-0.00049} \quad (-0.1\sigma)$
$n_s$	$0.9660^{+0.0086}_{-0.0083} \quad (+0.3\sigma)$	$\sigma_8$	$0.810^{+0.013}_{-0.012} \quad (+0.1\sigma)$	$z_{\text{eq}}$	$3391^{+66}_{-66} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0048}_{-0.0047} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.017}_{-0.016} \quad (+0.1\sigma)$	$100\theta_{\text{eq}}$	$0.815^{+0.012}_{-0.012} \quad (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$249^{+40}_{-40} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.014}_{-0.014} \quad (+0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0714^{+0.0010}_{-0.00096} \quad (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$40^{+10}_{-10} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.987^{+0.020}_{-0.020} \quad (+0.1\sigma)$	$H(0.57)$	$92.85^{+0.60}_{-0.59} \quad (-0.0\sigma)$
$A_{217}^{\text{PS}}$	$96^{+30}_{-30} \quad (+0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.437^{+0.046}_{-0.047} \quad (-0.1\sigma)$	$D_A(0.57)$	$1392^{+18}_{-17} \quad (+0.0\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$z_{\text{re}}$	$< 9.07 \quad (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6769^{+0.0045}_{-0.0045} \quad (+0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.41 \quad (-1.0\sigma)$	$10^9 A_s$	$2.092^{+0.062}_{-0.055} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.4717^{+0.0093}_{-0.0093} \quad (+0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.21}_{-0.21}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.022}_{-0.021} \quad (-0.3\sigma)$	$\sigma_8(0.57)$	$0.6017^{+0.0091}_{-0.0084} \quad (+0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1223^{+22}_{-23} \quad (-0.5\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24622^{+0.00017}_{-0.00018} \quad (-4.3\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5697^{+75}_{-79} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$30^{+5}_{-6} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.36}_{-0.36}$	$D_{810}$	$2531^{+27}_{-26} \quad (-0.2\sigma)$	$f_{2000}^{217}$	$107.1^{+3.9}_{-3.6} \quad (+0.2\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.34}_{-0.37}$	$D_{1420}$	$814^{+10}_{-10} \quad (-0.0\sigma)$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4} \quad (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.22}$	$n_{s,0.002}$	$0.9660^{+0.0086}_{-0.0083} \quad (+0.3\sigma)$	$\chi_{\text{lensing}}^2$	$9.6 \quad (\nu: 0.5) \quad (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.36}$	$Y_{\text{P}}$	$0.24489^{+0.00017}_{-0.00018} \quad (-4.3\sigma)$	$\chi_{\text{lowl}}^2$	$13.22 \quad (\nu: 0.4) \quad (-0.5\sigma)$
$c_{100}$	$0.9968^{+0.0020}_{-0.0019} \quad (-1.4\sigma)$	$\text{Age/Gyr}$	$13.817^{+0.061}_{-0.061} \quad (-0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.5 \quad (\nu: 15.1)$
$c_{217}$	$0.9974^{+0.0035}_{-0.0036} \quad (+0.9\sigma)$	$z_*$	$1090.13^{+0.67}_{-0.64} \quad (-0.0\sigma)$	$\chi_{\text{prior}}^2$	$9.4 \quad (\nu: 7.3) \quad (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_*$	$144.65^{+0.69}_{-0.68} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$8084.3 \quad (\nu: 15.2) \quad (+1339.7\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 8093.71; \Delta \bar{\chi}_{\text{eff}}^2 = 7282.29; R - 1 = 0.03316$$



## 2.72 base\_CamSpecHM\_TTTEEE\_lowl\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022355	$0.02237^{+0.00034}_{-0.00033}$ (+0.7 $\sigma$ )	$\beta_1^1$	-0.02	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	1.04110	$1.04110^{+0.00061}_{-0.00060}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	0.11871	$0.1186^{+0.0030}_{-0.0030}$ (-0.5 $\sigma$ )	$H_0$	67.79	$67.8^{+1.4}_{-1.4}$ (+0.5 $\sigma$ )	$z_{\text{drag}}$	1059.78	$1059.82^{+0.65}_{-0.64}$ (+0.6 $\sigma$ )
$100\theta_{\text{MC}}$	1.04090	$1.04090^{+0.00062}_{-0.00061}$ (+0.2 $\sigma$ )	$\Omega_\Lambda$	0.6916	$0.692^{+0.018}_{-0.019}$ (+0.5 $\sigma$ )	$r_{\text{drag}}$	147.45	$147.46^{+0.64}_{-0.62}$ (+0.2 $\sigma$ )
$\tau$	0.0668	$0.068^{+0.034}_{-0.034}$ (+0.3 $\sigma$ )	$\Omega_m$	0.3084	$0.308^{+0.019}_{-0.018}$ (-0.5 $\sigma$ )	$k_D$	0.14049	$0.14049^{+0.00066}_{-0.00066}$ (+0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.062	$3.064^{+0.061}_{-0.063}$ (+0.2 $\sigma$ )	$\Omega_m h^2$	0.14170	$0.1416^{+0.0028}_{-0.0028}$ (-0.4 $\sigma$ )	$100\theta_D$	0.160800	$0.16079^{+0.00037}_{-0.00038}$ (-0.8 $\sigma$ )
$n_s$	0.9678	$0.969^{+0.010}_{-0.0098}$ (+0.7 $\sigma$ )	$\Omega_m h^3$	0.09606	$0.09607^{+0.00058}_{-0.00059}$ (+0.4 $\sigma$ )	$z_{\text{eq}}$	3371	$3369^{+67}_{-67}$ (-0.4 $\sigma$ )
$y_{\text{cal}}$	1.0001	$1.0000^{+0.0050}_{-0.0049}$ (-0.1 $\sigma$ )	$\sigma_8$	0.8152	$0.816^{+0.020}_{-0.021}$ (+0.1 $\sigma$ )	$100\theta_{\text{eq}}$	0.8189	$0.819^{+0.013}_{-0.013}$ (+0.5 $\sigma$ )
$A_{100}^{\text{PS}}$	248.8	$245^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4527	$0.453^{+0.013}_{-0.013}$ (-0.4 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07174	$0.0718^{+0.0011}_{-0.0010}$ (+0.5 $\sigma$ )
$A_{143}^{\text{PS}}$	34.8	$38^{+20}_{-10}$ (-0.7 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6075	$0.608^{+0.014}_{-0.014}$ (-0.2 $\sigma$ )	$H(0.57)$	93.08	$93.11^{+0.62}_{-0.58}$ (+0.6 $\sigma$ )
$A_{217}^{\text{PS}}$	95.4	$98^{+30}_{-30}$ (+0.1 $\sigma$ )	$\sigma_8/h^{0.5}$	0.9901	$0.991^{+0.022}_{-0.022}$ (-0.1 $\sigma$ )	$D_A(0.57)$	1385.2	$1385^{+18}_{-18}$ (-0.5 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.5	$46^{+10}_{-10}$ (-2.9 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.449	$2.448^{+0.052}_{-0.054}$ (-0.2 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.67523	$0.6751^{+0.0047}_{-0.0047}$ (-0.5 $\sigma$ )
$A_{143}^{\text{tSZ}}$	3.32	< 6.74 (-1.0 $\sigma$ )	$z_{\text{re}}$	8.89	$8.9^{+3.2}_{-3.3}$ (+0.3 $\sigma$ )	$f\sigma_8(0.57)$	0.4732	$0.473^{+0.010}_{-0.011}$ (-0.1 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.407	$0.51^{+0.23}_{-0.21}$	$10^9 A_s$	2.138	$2.14^{+0.13}_{-0.13}$ (+0.2 $\sigma$ )	$\sigma_8(0.57)$	0.6072	$0.608^{+0.018}_{-0.018}$ (+0.2 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8706	$1.870^{+0.024}_{-0.024}$ (-0.7 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246296	$0.24630^{+0.00014}_{-0.00014}$ (-4.9 $\sigma$ )
$A^{\text{kSZ}}$	5.3	—	$D_{40}$	1223.7	$1223^{+23}_{-22}$ (-0.8 $\sigma$ )	$f_{2000}^{143}$	29.3	$29^{+5}_{-5}$ (-0.6 $\sigma$ )
$A_{100}^{\text{dust}}$	0.987	$0.99^{+0.38}_{-0.38}$	$D_{220}$	5711	$5709^{+75}_{-75}$ (-0.5 $\sigma$ )	$f_{2000}^{217}$	106.65	$106.2^{+3.8}_{-3.7}$ (-0.1 $\sigma$ )
$A_{143}^{\text{dust}}$	1.037	$1.03^{+0.36}_{-0.36}$	$D_{810}$	2528.0	$2529^{+27}_{-27}$ (-0.4 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.73	$32^{+4}_{-4}$ (-0.7 $\sigma$ )
$A_{217}^{\text{dust}}$	1.217	$1.21^{+0.23}_{-0.23}$	$D_{1420}$	814.0	$814.6^{+9.4}_{-9.4}$ (+0.0 $\sigma$ )	$\chi_{\text{lensing}}^2$	9.25	10.1 ( $\nu$ : 1.4) (-0.2 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.973	$0.99^{+0.35}_{-0.35}$	$n_{s,0.002}$	0.9678	$0.969^{+0.010}_{-0.0098}$ (+0.7 $\sigma$ )	$\chi_{\text{lowl}}^2$	13.24	13.23 ( $\nu$ : 0.3) (-0.8 $\sigma$ )
$c_{100}$	0.99667	$0.9968^{+0.0019}_{-0.0019}$ (-1.8 $\sigma$ )	$Y_{\text{P}}$	0.244965	$0.24497^{+0.00015}_{-0.00014}$ (-4.9 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	12937.5	12953.9 ( $\nu$ : 18.2)
$c_{217}$	0.99733	$0.9971^{+0.0035}_{-0.0035}$ (+0.7 $\sigma$ )	Age/Gyr	13.794	$13.792^{+0.053}_{-0.055}$ (-0.6 $\sigma$ )	$\chi_{\text{CMB}}^2$	12960.0	12977.2 ( $\nu$ : 17.7) (+1587.4 $\sigma$ )
$c_{TE}$	1.0048	$1.0051^{+0.0087}_{-0.0085}$	$z_*$	1089.81	$1089.79^{+0.62}_{-0.62}$ (-0.7 $\sigma$ )			
$c_{EE}$	1.0013	$1.0015^{+0.0082}_{-0.0081}$	$r_*$	144.78	$144.80^{+0.65}_{-0.64}$ (+0.3 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 12963.86$ ;  $\Delta\chi_{\text{eff}}^2 = 10498.29$ ;  $\bar{\chi}_{\text{eff}}^2 = 12986.27$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 10488.77$ ;  $R - 1 = 0.00826$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.25 ( $\Delta$  -0.51) commander\_rc2\_v1.1\_l2\_29\_B: 13.24 ( $\Delta$  -0.47) CamSpec like\_v9.10CMH\_unified: 12937.55

### 2.73 base\_CamSpecHM\_TTTEEE\_lowl\_lensing\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00029}_{-0.00028} (+0.6\sigma)$	$\Omega_\Lambda$	$0.692^{+0.013}_{-0.013} (+0.3\sigma)$	$100\theta_D$	$0.16079^{+0.00035}_{-0.00035} (-0.7\sigma)$
$\Omega_c h^2$	$0.1186^{+0.0022}_{-0.0022} (-0.3\sigma)$	$\Omega_m$	$0.308^{+0.013}_{-0.013} (-0.3\sigma)$	$z_{\text{eq}}$	$3369^{+49}_{-49} (-0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04090^{+0.00057}_{-0.00056} (+0.1\sigma)$	$\Omega_m h^2$	$0.1416^{+0.0020}_{-0.0021} (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.8193^{+0.0095}_{-0.0092} (+0.3\sigma)$
$\tau$	$0.068^{+0.028}_{-0.029} (+0.2\sigma)$	$\Omega_m h^3$	$0.09607^{+0.00058}_{-0.00059} (+0.4\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07178^{+0.00074}_{-0.00072} (+0.3\sigma)$
$\ln(10^{10} A_s)$	$3.064^{+0.052}_{-0.054} (+0.1\sigma)$	$\sigma_8$	$0.816^{+0.019}_{-0.020} (+0.0\sigma)$	$H(0.57)$	$93.11^{+0.45}_{-0.43} (+0.4\sigma)$
$n_s$	$0.9687^{+0.0083}_{-0.0084} (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.012}_{-0.012} (-0.2\sigma)$	$D_A(0.57)$	$1385^{+13}_{-13} (-0.4\sigma)$
$y_{\text{cal}}$	$0.99999^{+0.0050}_{-0.0049} (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.013}_{-0.014} (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6751^{+0.0033}_{-0.0033} (-0.3\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.991^{+0.022}_{-0.022} (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.473^{+0.010}_{-0.011} (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$39^{+20}_{-10} (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.448^{+0.053}_{-0.054} (-0.3\sigma)$	$\sigma_8(0.57)$	$0.608^{+0.015}_{-0.016} (+0.1\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} (+0.1\sigma)$	$z_{\text{re}}$	$8.9^{+2.7}_{-2.8} (+0.2\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24630^{+0.00012}_{-0.00012} (-5.9\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} (-2.9\sigma)$	$10^9 A_s$	$2.14^{+0.11}_{-0.11} (+0.1\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} (-0.5\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.75 (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.022}_{-0.022} (-0.6\sigma)$	$f_{2000}^{217}$	$106.2^{+3.7}_{-3.6} (+0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.21}$	$D_{40}$	$1223^{+22}_{-21} (-0.8\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} (-0.6\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5709^{+75}_{-74} (-0.5\sigma)$	$\chi_{\text{lensing}}^2$	$10.1 (\nu: 1.4) (-0.2\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2529^{+27}_{-27} (-0.4\sigma)$	$\chi_{\text{lowl}}^2$	$13.22 (\nu: 0.3) (-0.7\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{1420}$	$814.6^{+9.5}_{-9.4} (-0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$12953.4 (\nu: 17.0)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.36}$	$n_{s,0.002}$	$0.9687^{+0.0083}_{-0.0084} (+0.6\sigma)$	$\chi_{6\text{DF}}^2$	$0.040 (\nu: 0.0) (-0.2\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.23}$	$Y_{\text{P}}$	$0.24497^{+0.00013}_{-0.00012} (-5.9\sigma)$	$\chi_{\text{MGS}}^2$	$1.49 (\nu: 0.1) (+0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.34}_{-0.35}$	$\text{Age/Gyr}$	$13.792^{+0.042}_{-0.044} (-0.5\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.76 (\nu: 0.1) (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.8\sigma)$	$z_*$	$1089.79^{+0.48}_{-0.48} (-0.6\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.57 (\nu: 0.1) (-0.3\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0034} (+0.7\sigma)$	$r_*$	$144.79^{+0.50}_{-0.50} (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$9.0 (\nu: 6.4) (-1.9\sigma)$
$c_{TE}$	$1.0051^{+0.0086}_{-0.0084}$	$100\theta_*$	$1.04110^{+0.00056}_{-0.00056} (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$12976.7 (\nu: 16.5) (+1631.2\sigma)$
$c_{EE}$	$1.0016^{+0.0082}_{-0.0082}$	$z_{\text{drag}}$	$1059.81^{+0.62}_{-0.60} (+0.5\sigma)$	$\chi_{\text{BAO}}^2$	$4.86 (\nu: 0.3) (-0.1\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$r_{\text{drag}}$	$147.46^{+0.51}_{-0.51} (-0.0\sigma)$		
$H_0$	$67.84^{+0.98}_{-0.96} (+0.4\sigma)$	$k_D$	$0.14049^{+0.00060}_{-0.00060} (+0.3\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 12990.61; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.73; R - 1 = 0.00937$$

## 2.74 base\_CamSpecHM\_TTTEEE\_lowl\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00029}_{-0.00028} (+0.6\sigma)$	$\Omega_\Lambda$	$0.693^{+0.012}_{-0.013} (+0.3\sigma)$	$100\theta_D$	$0.16077^{+0.00035}_{-0.00036} (-0.7\sigma)$
$\Omega_c h^2$	$0.1184^{+0.0021}_{-0.0021} (-0.3\sigma)$	$\Omega_m$	$0.307^{+0.013}_{-0.012} (-0.3\sigma)$	$z_{\text{eq}}$	$3365^{+48}_{-48} (-0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04093^{+0.00056}_{-0.00056} (+0.0\sigma)$	$\Omega_m h^2$	$0.1414^{+0.0020}_{-0.0020} (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.8201^{+0.0092}_{-0.0090} (+0.3\sigma)$
$\tau$	$0.070^{+0.028}_{-0.029} (+0.2\sigma)$	$\Omega_m h^3$	$0.09608^{+0.00058}_{-0.00059} (+0.3\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07185^{+0.00071}_{-0.00070} (+0.3\sigma)$
$\ln(10^{10} A_s)$	$3.067^{+0.052}_{-0.054} (+0.1\sigma)$	$\sigma_8$	$0.817^{+0.019}_{-0.020} (+0.0\sigma)$	$H(0.57)$	$93.15^{+0.45}_{-0.43} (+0.4\sigma)$
$n_s$	$0.9692^{+0.0083}_{-0.0083} (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.012}_{-0.012} (-0.2\sigma)$	$D_A(0.57)$	$1383^{+13}_{-13} (-0.4\sigma)$
$y_{\text{cal}}$	$0.99998^{+0.0050}_{-0.0049} (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.014}_{-0.014} (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6748^{+0.0032}_{-0.0032} (-0.3\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.991^{+0.022}_{-0.022} (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.473^{+0.010}_{-0.011} (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$38^{+20}_{-10} (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.449^{+0.053}_{-0.054} (-0.3\sigma)$	$\sigma_8(0.57)$	$0.609^{+0.016}_{-0.016} (+0.1\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} (+0.1\sigma)$	$z_{\text{re}}$	$9.1^{+2.7}_{-2.8} (+0.2\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24631^{+0.00012}_{-0.00012} (-6.0\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} (-2.9\sigma)$	$10^9 A_s$	$2.15^{+0.11}_{-0.11} (+0.1\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} (-0.5\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.83 (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.022}_{-0.022} (-0.6\sigma)$	$f_{2000}^{217}$	$106.1^{+3.7}_{-3.6} (+0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.21}$	$D_{40}$	$1222^{+22}_{-21} (-0.8\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} (-0.6\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5710^{+75}_{-74} (-0.5\sigma)$	$\chi_{\text{lensing}}^2$	$10.1 (\nu: 1.5) (-0.2\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2528^{+27}_{-27} (-0.4\sigma)$	$\chi_{\text{lowl}}^2$	$13.18 (\nu: 0.3) (-0.7\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$D_{1420}$	$814.7^{+9.5}_{-9.4} (-0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$12953.4 (\nu: 17.1)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.36}$	$n_{s,0.002}$	$0.9692^{+0.0083}_{-0.0083} (+0.6\sigma)$	$\chi_{\text{H070p6}}^2$	$0.67 (\nu: 0.0) (-0.3\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.23}$	$Y_{\text{P}}$	$0.24498^{+0.00013}_{-0.00012} (-6.0\sigma)$	$\chi_{\text{JLA}}^2$	$706.66 (\nu: 0.0) (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.34}_{-0.35}$	$\text{Age/Gyr}$	$13.789^{+0.042}_{-0.043} (-0.4\sigma)$	$\chi_{6\text{DF}}^2$	$0.033 (\nu: 0.0) (-0.2\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.8\sigma)$	$z_*$	$1089.75^{+0.47}_{-0.47} (-0.6\sigma)$	$\chi_{\text{MGS}}^2$	$1.59 (\nu: 0.1) (+0.3\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0034} (+0.7\sigma)$	$r_*$	$144.83^{+0.50}_{-0.49} (+0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.75 (\nu: 0.1) (-0.0\sigma)$
$c_{TE}$	$1.0050^{+0.0087}_{-0.0084}$	$100\theta_*$	$1.04112^{+0.00056}_{-0.00055} (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.49 (\nu: 0.1) (-0.3\sigma)$
$c_{EE}$	$1.0015^{+0.0082}_{-0.0082}$	$z_{\text{drag}}$	$1059.84^{+0.63}_{-0.59} (+0.5\sigma)$	$\chi_{\text{prior}}^2$	$9.0 (\nu: 6.4) (-1.9\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$r_{\text{drag}}$	$147.50^{+0.51}_{-0.51} (-0.0\sigma)$	$\chi_{\text{CMB}}^2$	$12976.7 (\nu: 16.5) (+1630.2\sigma)$
$H_0$	$67.93^{+0.96}_{-0.93} (+0.4\sigma)$	$k_D$	$0.14046^{+0.00060}_{-0.00060} (+0.3\sigma)$	$\chi_{\text{BAO}}^2$	$4.85 (\nu: 0.2) (+0.0\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 13697.93; \Delta\chi_{\text{eff}}^2 = 10488.62; R - 1 = 0.01035$$

## 2.75 base\_CamSpecHM\_TTTEEE\_lowl\_lensing\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00033}_{-0.00032} \quad (+0.7\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.04112^{+0.00060}_{-0.00058} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1184^{+0.0027}_{-0.0029} \quad (-0.4\sigma)$	$H_0$	$67.9^{+1.3}_{-1.3} \quad (+0.5\sigma)$	$z_{\text{drag}}$	$1059.83^{+0.64}_{-0.62} \quad (+0.6\sigma)$
$100\theta_{\text{MC}}$	$1.04093^{+0.00060}_{-0.00059} \quad (+0.2\sigma)$	$\Omega_\Lambda$	$0.693^{+0.017}_{-0.016} \quad (+0.5\sigma)$	$r_{\text{drag}}$	$147.50^{+0.62}_{-0.59} \quad (+0.2\sigma)$
$\tau$	$0.071^{+0.028}_{-0.027} \quad (+0.3\sigma)$	$\Omega_m$	$0.307^{+0.016}_{-0.017} \quad (-0.5\sigma)$	$k_D$	$0.14046^{+0.00065}_{-0.00065} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.069^{+0.054}_{-0.051} \quad (+0.2\sigma)$	$\Omega_m h^2$	$0.1415^{+0.0025}_{-0.0027} \quad (-0.4\sigma)$	$100\theta_D$	$0.16078^{+0.00036}_{-0.00037} \quad (-0.7\sigma)$
$n_s$	$0.9693^{+0.0099}_{-0.0099} \quad (+0.7\sigma)$	$\Omega_m h^3$	$0.09607^{+0.00058}_{-0.00058} \quad (+0.4\sigma)$	$z_{\text{eq}}$	$3365^{+60}_{-64} \quad (-0.4\sigma)$
$y_{\text{cal}}$	$0.9999^{+0.0049}_{-0.0050} \quad (-0.1\sigma)$	$\sigma_8$	$0.817^{+0.019}_{-0.018} \quad (+0.1\sigma)$	$100\theta_{\text{eq}}$	$0.820^{+0.013}_{-0.012} \quad (+0.4\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.013}_{-0.013} \quad (-0.4\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0718^{+0.0010}_{-0.00097} \quad (+0.4\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.013}_{-0.013} \quad (-0.2\sigma)$	$H(0.57)$	$93.14^{+0.59}_{-0.57} \quad (+0.5\sigma)$
$A_{217}^{\text{PS}}$	$98^{+20}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$0.992^{+0.020}_{-0.020} \quad (-0.2\sigma)$	$D_A(0.57)$	$1384^{+16}_{-18} \quad (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.451^{+0.051}_{-0.048} \quad (-0.3\sigma)$	$F_{\text{AP}}(0.57)$	$0.6748^{+0.0042}_{-0.0044} \quad (-0.5\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.81 \quad (-1.0\sigma)$	$z_{\text{re}}$	$< 11.5 \quad (+0.3\sigma)$	$f\sigma_8(0.57)$	$0.4740^{+0.0098}_{-0.0096} \quad (-0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.21}$	$10^9 A_s$	$2.15^{+0.12}_{-0.11} \quad (+0.2\sigma)$	$\sigma_8(0.57)$	$0.609^{+0.016}_{-0.015} \quad (+0.2\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.869^{+0.023}_{-0.023} \quad (-0.7\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24631^{+0.00014}_{-0.00014} \quad (-5.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{40}$	$1222^{+22}_{-22} \quad (-0.8\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{220}$	$5708^{+75}_{-75} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.1^{+3.7}_{-3.7} \quad (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.36}$	$D_{810}$	$2528^{+27}_{-27} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.23}$	$D_{1420}$	$814.5^{+9.5}_{-9.4} \quad (+0.0\sigma)$	$\chi_{\text{lensing}}^2$	$10.1 \quad (\nu: 1.5) \quad (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.9693^{+0.0099}_{-0.0099} \quad (+0.7\sigma)$	$\chi_{\text{lowl}}^2$	$13.23 \quad (\nu: 0.3) \quad (-0.8\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_{\text{P}}$	$0.24498^{+0.00015}_{-0.00013} \quad (-5.2\sigma)$	$\chi_{\text{CamSpec}}^2$	$12953.6 \quad (\nu: 17.5)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0034} \quad (+0.7\sigma)$	$\text{Age/Gyr}$	$13.790^{+0.050}_{-0.053} \quad (-0.6\sigma)$	$\chi_{\text{prior}}^2$	$9.0 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{TE}$	$1.0050^{+0.0085}_{-0.0085}$	$z_*$	$1089.76^{+0.58}_{-0.60} \quad (-0.7\sigma)$	$\chi_{\text{CMB}}^2$	$12977.0 \quad (\nu: 17.0) \quad (+1621.7\sigma)$
$c_{EE}$	$1.0015^{+0.0082}_{-0.0081}$	$r_*$	$144.83^{+0.64}_{-0.59} \quad (+0.3\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 12986.02; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.83; R - 1 = 0.01161$$

## 2.76 base\_CamSpecHM\_TTTEEE\_lowl\_lensing\_post\_BAO\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00029}_{-0.00028} (+0.6\sigma)$	$\Omega_\Lambda$	$0.693^{+0.013}_{-0.012} (+0.3\sigma)$	$100\theta_D$	$0.16079^{+0.00035}_{-0.00036} (-0.7\sigma)$
$\Omega_c h^2$	$0.1186^{+0.0021}_{-0.0021} (-0.3\sigma)$	$\Omega_m$	$0.307^{+0.013}_{-0.013} (-0.3\sigma)$	$z_{\text{eq}}$	$3368^{+47}_{-48} (-0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04091^{+0.00056}_{-0.00055} (+0.0\sigma)$	$\Omega_m h^2$	$0.1416^{+0.0020}_{-0.0020} (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.8196^{+0.0093}_{-0.0088} (+0.3\sigma)$
$\tau$	$0.069^{+0.025}_{-0.025} (+0.2\sigma)$	$\Omega_m h^3$	$0.09607^{+0.00058}_{-0.00059} (+0.3\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07180^{+0.00072}_{-0.00069} (+0.3\sigma)$
$\ln(10^{10} A_s)$	$3.067^{+0.048}_{-0.047} (+0.1\sigma)$	$\sigma_8$	$0.817^{+0.018}_{-0.018} (+0.0\sigma)$	$H(0.57)$	$93.12^{+0.45}_{-0.42} (+0.4\sigma)$
$n_s$	$0.9689^{+0.0082}_{-0.0081} (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.012}_{-0.012} (-0.3\sigma)$	$D_A(0.57)$	$1384^{+12}_{-13} (-0.4\sigma)$
$y_{\text{cal}}$	$0.9999^{+0.0050}_{-0.0049} (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.013}_{-0.013} (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6750^{+0.0032}_{-0.0032} (-0.3\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.992^{+0.021}_{-0.020} (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.474^{+0.010}_{-0.0095} (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$39^{+10}_{-10} (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.451^{+0.052}_{-0.047} (-0.3\sigma)$	$\sigma_8(0.57)$	$0.609^{+0.014}_{-0.014} (+0.1\sigma)$
$A_{217}^{\text{PS}}$	$98^{+20}_{-30} (+0.1\sigma)$	$z_{\text{re}}$	$9.1^{+2.1}_{-2.5} (+0.2\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24630^{+0.00012}_{-0.00012} (-6.0\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} (-2.9\sigma)$	$10^9 A_s$	$2.15^{+0.10}_{-0.10} (+0.1\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} (-0.5\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.77 (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.021}_{-0.022} (-0.6\sigma)$	$f_{2000}^{217}$	$106.1^{+3.6}_{-3.6} (+0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.21}$	$D_{40}$	$1222^{+22}_{-21} (-0.8\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} (-0.6\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5708^{+74}_{-74} (-0.5\sigma)$	$\chi_{\text{lensing}}^2$	$10.1 (\nu: 1.5) (-0.2\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2528^{+26}_{-27} (-0.4\sigma)$	$\chi_{\text{lowl}}^2$	$13.23 (\nu: 0.3) (-0.7\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$D_{1420}$	$814.5^{+9.5}_{-9.4} (-0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$12953.2 (\nu: 16.6)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.36}$	$n_{s,0.002}$	$0.9689^{+0.0082}_{-0.0081} (+0.6\sigma)$	$\chi_{6\text{DF}}^2$	$0.036 (\nu: 0.0) (-0.2\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.23}$	$Y_{\text{P}}$	$0.24497^{+0.00013}_{-0.00012} (-6.0\sigma)$	$\chi_{\text{MGS}}^2$	$1.52 (\nu: 0.1) (+0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.34}_{-0.35}$	$\text{Age/Gyr}$	$13.791^{+0.041}_{-0.043} (-0.5\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.74 (\nu: 0.1) (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.8\sigma)$	$z_*$	$1089.78^{+0.47}_{-0.48} (-0.6\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.54 (\nu: 0.1) (-0.3\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0034} (+0.7\sigma)$	$r_*$	$144.81^{+0.50}_{-0.49} (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$9.0 (\nu: 6.3) (-1.9\sigma)$
$c_{TE}$	$1.0050^{+0.0085}_{-0.0084}$	$100\theta_*$	$1.04111^{+0.00055}_{-0.00055} (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$12976.6 (\nu: 16.1) (+1638.9\sigma)$
$c_{EE}$	$1.0016^{+0.0082}_{-0.0082}$	$z_{\text{drag}}$	$1059.82^{+0.61}_{-0.60} (+0.5\sigma)$	$\chi_{\text{BAO}}^2$	$4.83 (\nu: 0.2) (-0.0\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$r_{\text{drag}}$	$147.48^{+0.51}_{-0.50} (-0.0\sigma)$		
$H_0$	$67.87^{+0.96}_{-0.92} (+0.4\sigma)$	$k_D$	$0.14048^{+0.00060}_{-0.00060} (+0.3\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 12990.40; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.72; R - 1 = 0.01038$$

## 2.77 base\_CamSpecHM\_TTTEEE\_lowl\_lensing\_post\_reion

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00030}_{-0.00029} \quad (+0.6\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	$1.04101^{+0.00055}_{-0.00053} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1195^{+0.0023}_{-0.0024} \quad (-0.4\sigma)$	$H_0$	$67.5^{+1.1}_{-1.0} \quad (+0.5\sigma)$	$z_{\text{drag}}$	$1059.72^{+0.64}_{-0.64} \quad (+0.5\sigma)$
$100\theta_{\text{MC}}$	$1.04081^{+0.00055}_{-0.00054} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.687^{+0.014}_{-0.014} \quad (+0.4\sigma)$	$r_{\text{drag}}$	$147.31^{+0.52}_{-0.49} \quad (+0.1\sigma)$
$\tau$	$< 0.0685 \quad (+0.2\sigma)$	$\Omega_m$	$0.313^{+0.014}_{-0.014} \quad (-0.4\sigma)$	$k_D$	$0.14060^{+0.00060}_{-0.00060} \quad (+0.2\sigma)$
$\ln(10^{10} A_s)$	$3.042^{+0.029}_{-0.026} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1424^{+0.0021}_{-0.0022} \quad (-0.3\sigma)$	$100\theta_D$	$0.16084^{+0.00036}_{-0.00037} \quad (-0.7\sigma)$
$n_s$	$0.9661^{+0.0080}_{-0.0078} \quad (+0.7\sigma)$	$\Omega_m h^3$	$0.09605^{+0.00058}_{-0.00058} \quad (+0.4\sigma)$	$z_{\text{eq}}$	$3388^{+50}_{-53} \quad (-0.3\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0050} \quad (+0.0\sigma)$	$\sigma_8$	$0.809^{+0.012}_{-0.011} \quad (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.816^{+0.010}_{-0.0094} \quad (+0.4\sigma)$
$A_{100}^{\text{PS}}$	$248^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.013}_{-0.014} \quad (-0.4\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07149^{+0.00080}_{-0.00075} \quad (+0.4\sigma)$
$A_{143}^{\text{PS}}$	$40^{+10}_{-10} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.012}_{-0.012} \quad (-0.4\sigma)$	$H(0.57)$	$92.95^{+0.48}_{-0.45} \quad (+0.5\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-20} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$0.985^{+0.017}_{-0.017} \quad (-0.4\sigma)$	$D_A(0.57)$	$1390^{+14}_{-14} \quad (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.435^{+0.041}_{-0.040} \quad (-0.6\sigma)$	$F_{\text{AP}}(0.57)$	$0.6764^{+0.0035}_{-0.0037} \quad (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.49 \quad (-1.0\sigma)$	$z_{\text{re}}$	$< 9.04 \quad (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.4707^{+0.0083}_{-0.0080} \quad (-0.3\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.20}$	$10^9 A_s$	$2.094^{+0.061}_{-0.054} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.6014^{+0.0087}_{-0.0080} \quad (-0.0\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.876^{+0.022}_{-0.021} \quad (-0.6\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24627^{+0.00013}_{-0.00013} \quad (-5.5\sigma)$
$A^{\text{kSZ}}$	—	$D_{40}$	$1225^{+22}_{-21} \quad (-0.8\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.39}_{-0.38}$	$D_{220}$	$5713^{+75}_{-77} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.7^{+3.4}_{-3.5} \quad (+0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2532^{+26}_{-25} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32.1^{+3.5}_{-3.7} \quad (-0.6\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$D_{1420}$	$814.9^{+9.4}_{-9.5} \quad (+0.1\sigma)$	$\chi_{\text{lensing}}^2$	$9.36 \quad (\nu: 0.3) \quad (-0.4\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.9661^{+0.0080}_{-0.0078} \quad (+0.7\sigma)$	$\chi_{\text{lowl}}^2$	$13.26 \quad (\nu: 0.3) \quad (-0.8\sigma)$
$c_{100}$	$0.9968^{+0.0020}_{-0.0019} \quad (-1.7\sigma)$	$Y_{\text{P}}$	$0.24494^{+0.00013}_{-0.00012} \quad (-5.6\sigma)$	$\chi_{\text{CamSpec}}^2$	$12954.3 \quad (\nu: 16.8)$
$c_{217}$	$0.9972^{+0.0034}_{-0.0034} \quad (+0.8\sigma)$	$\text{Age/Gyr}$	$13.805^{+0.044}_{-0.045} \quad (-0.5\sigma)$	$\chi_{\text{prior}}^2$	$10.1 \quad (\nu: 7.2) \quad (-1.8\sigma)$
$c_{TE}$	$1.0058^{+0.0085}_{-0.0086}$	$z_*$	$1089.94^{+0.51}_{-0.52} \quad (-0.7\sigma)$	$\chi_{\text{CMB}}^2$	$12976.9 \quad (\nu: 16.8) \quad (+1622.6\sigma)$
$c_{EE}$	$1.0018^{+0.0084}_{-0.0081}$	$r_*$	$144.63^{+0.51}_{-0.51} \quad (+0.2\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 12987.01; \Delta\bar{\chi}_{\text{eff}}^2 = 10489.09; R - 1 = 0.01991$$

## 2.78 base\_plikHM\_TT\_lowl\_reion

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022112	$0.02212^{+0.00042}_{-0.00043}$	$\Omega_m$	0.3228	$0.322^{+0.026}_{-0.025}$	$100\theta_*$	1.04089	$1.04094^{+0.00090}_{-0.00088}$
$\Omega_c h^2$	0.12097	$0.1208^{+0.0040}_{-0.0041}$	$\Omega_m h^2$	0.14373	$0.1436^{+0.0039}_{-0.0039}$	$D_A/\text{Gpc}$	13.871	$13.874^{+0.086}_{-0.086}$
$100\theta_{\text{MC}}$	1.04069	$1.04073^{+0.00091}_{-0.00090}$	$\Omega_m h^3$	0.09590	$0.09591^{+0.00089}_{-0.00089}$	$z_{\text{drag}}$	1059.40	$1059.41^{+0.88}_{-0.88}$
$\tau$	0.0516	$0.055^{+0.016}_{-0.014}$	$\sigma_8$	0.8126	$0.815^{+0.019}_{-0.017}$	$r_{\text{drag}}$	147.12	$147.16^{+0.94}_{-0.92}$
$\ln(10^{10} A_s)$	3.0403	$3.046^{+0.034}_{-0.031}$	$\sigma_8 \Omega_m^{0.5}$	0.4617	$0.462^{+0.026}_{-0.026}$	$k_D$	0.14063	$0.1406^{+0.0010}_{-0.0010}$
$n_s$	0.9618	$0.962^{+0.011}_{-0.011}$	$\sigma_8 \Omega_m^{0.25}$	0.6125	$0.613^{+0.023}_{-0.023}$	$100\theta_D$	0.16105	$0.16106^{+0.00053}_{-0.00051}$
$y_{\text{cal}}$	1.00037	$1.0005^{+0.0049}_{-0.0049}$	$\sigma_8/h^{0.5}$	0.9948	$0.997^{+0.032}_{-0.032}$	$z_{\text{eq}}$	3419	$3416^{+92}_{-93}$
$A_{217}^{\text{CIB}}$	67.9	$65^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.458	$2.464^{+0.076}_{-0.074}$	$k_{\text{eq}}$	0.010436	$0.01042^{+0.00028}_{-0.00028}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$z_{\text{re}}$	7.47	$< 9.22$	$100\theta_{\text{eq}}$	0.8094	$0.810^{+0.018}_{-0.017}$
$A_{143}^{\text{tSZ}}$	7.12	$4.9^{+3.8}_{-3.8}$	$10^9 A_s$	2.091	$2.104^{+0.072}_{-0.065}$	$100\theta_{s,\text{eq}}$	0.4475	$0.4479^{+0.0091}_{-0.0086}$
$A_{100}^{\text{PS}}$	256	$263^{+50}_{-50}$	$10^9 A_s e^{-2\tau}$	1.8862	$1.886^{+0.027}_{-0.027}$	$r_{\text{drag}}/D_V(0.57)$	0.07097	$0.0710^{+0.0014}_{-0.0013}$
$A_{143}^{\text{PS}}$	41.1	$46^{+20}_{-20}$	$D_{40}$	1235.5	$1237^{+30}_{-30}$	$H(0.57)$	92.62	$92.67^{+0.77}_{-0.72}$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$D_{220}$	5714	$5716^{+81}_{-82}$	$D_A(0.57)$	1399.5	$1398^{+24}_{-24}$
$A_{217}^{\text{PS}}$	97.9	$97^{+20}_{-20}$	$D_{810}$	2537.1	$2536^{+27}_{-27}$	$F_{\text{AP}}(0.57)$	0.6789	$0.6786^{+0.0064}_{-0.0063}$
$A^{\text{kSZ}}$	0.0	—	$D_{1420}$	814.5	$814.2^{+9.8}_{-9.9}$	$f\sigma_8(0.57)$	0.4752	$0.476^{+0.015}_{-0.015}$
$A_{100}^{\text{dustTT}}$	7.47	$7.5^{+3.6}_{-3.7}$	$D_{2000}$	229.62	$229.6^{+3.4}_{-3.5}$	$\sigma_8(0.57)$	0.6018	$0.603^{+0.011}_{-0.010}$
$A_{143}^{\text{dustTT}}$	9.07	$9.1^{+3.6}_{-3.6}$	$n_{s,0.002}$	0.9618	$0.962^{+0.011}_{-0.011}$	$f_{2000}^{143}$	30.8	$31^{+6}_{-5}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.3^{+8.2}_{-8.2}$	$Y_{\text{P}}$	0.245274	$0.24528^{+0.00019}_{-0.00019}$	$f_{2000}^{143 \times 217}$	33.29	$33^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	0.246600	$0.24660^{+0.00019}_{-0.00020}$	$f_{2000}^{217}$	106.83	$106.9^{+3.8}_{-3.8}$
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	$10^5 \text{D}/\text{H}$	2.640	$2.639^{+0.084}_{-0.081}$	$\chi_{\text{lowl}}^2$	14.10	$14.3 (\nu: 0.8)$
$c_{217}$	0.99602	$0.9961^{+0.0029}_{-0.0029}$	$\text{Age}/\text{Gyr}$	13.834	$13.831^{+0.071}_{-0.070}$	$\chi_{\text{plik}}^2$	766.0	$779.2 (\nu: 15.2)$
$H_0$	66.73	$66.8^{+1.8}_{-1.8}$	$z_*$	1090.33	$1090.31^{+0.80}_{-0.78}$	$\chi_{\text{prior}}^2$	2.2	$8.6 (\nu: 8.1)$
$\Omega_\Lambda$	0.6772	$0.678^{+0.025}_{-0.026}$	$r_*$	144.38	$144.42^{+0.93}_{-0.92}$	$\chi_{\text{CMB}}^2$	780.1	$793.5 (\nu: 14.6)$

Best-fit  $\chi_{\text{eff}}^2 = 782.30$ ;  $\bar{\chi}_{\text{eff}}^2 = 802.10$ ;  $R - 1 = 0.00778$

$\chi_{\text{eff}}^2$ : CMB - commander\_rc2\_v1.1\_l2\_29\_B: 14.10 plik\_dx11dr2\_HM\_v18\_TT: 765.95

## 2.79 base\_plikHM\_TT\_lowl\_reion\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022214	$0.02220^{+0.00039}_{-0.00038}$	$\Omega_m h^3$	0.09593	$0.09590^{+0.00088}_{-0.00090}$	$k_D$	0.14039	$0.14036^{+0.00089}_{-0.00089}$
$\Omega_c h^2$	0.11939	$0.1194^{+0.0025}_{-0.0024}$	$\sigma_8$	0.8091	$0.810^{+0.016}_{-0.016}$	$100\theta_D$	0.16099	$0.16102^{+0.00051}_{-0.00050}$
$100\theta_{MC}$	1.04092	$1.04091^{+0.00082}_{-0.00080}$	$\sigma_8 \Omega_m^{0.5}$	0.4525	$0.453^{+0.017}_{-0.016}$	$z_{eq}$	3384	$3383^{+57}_{-57}$
$\tau$	0.0544	$0.056^{+0.016}_{-0.015}$	$\sigma_8 \Omega_m^{0.25}$	0.6051	$0.606^{+0.016}_{-0.016}$	$k_{eq}$	0.010328	$0.01033^{+0.00018}_{-0.00017}$
$\ln(10^{10} A_s)$	3.0423	$3.046^{+0.035}_{-0.032}$	$\sigma_8/h^{0.5}$	0.9853	$0.987^{+0.024}_{-0.023}$	$100\theta_{eq}$	0.8162	$0.816^{+0.010}_{-0.010}$
$n_s$	0.9654	$0.9651^{+0.0083}_{-0.0082}$	$\langle d^2 \rangle^{1/2}$	2.437	$2.442^{+0.058}_{-0.055}$	$100\theta_{s,eq}$	0.4510	$0.4510^{+0.0054}_{-0.0054}$
$y_{cal}$	1.00040	$1.0006^{+0.0050}_{-0.0048}$	$z_{re}$	7.71	$< 9.32$	$r_{drag}/D_V(0.57)$	0.07152	$0.07152^{+0.00082}_{-0.00080}$
$A_{217}^{CIB}$	67.8	$65^{+10}_{-10}$	$10^9 A_s$	2.095	$2.103^{+0.073}_{-0.067}$	$H(0.57)$	92.91	$92.90^{+0.53}_{-0.51}$
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8794	$1.880^{+0.023}_{-0.022}$	$D_A(0.57)$	1390.0	$1390^{+15}_{-15}$
$A_{143}^{tSZ}$	7.13	$4.9^{+3.8}_{-3.8}$	$D_{40}$	1228.2	$1230^{+25}_{-26}$	$F_{AP}(0.57)$	0.67635	$0.6764^{+0.0038}_{-0.0037}$
$A_{100}^{PS}$	256	$262^{+50}_{-50}$	$D_{220}$	5721	$5723^{+79}_{-79}$	$f\sigma_8(0.57)$	0.4708	$0.472^{+0.012}_{-0.011}$
$A_{143}^{PS}$	40.5	$45^{+20}_{-10}$	$D_{810}$	2536.0	$2536^{+27}_{-26}$	$\sigma_8(0.57)$	0.6016	$0.603^{+0.011}_{-0.010}$
$A_{143 \times 217}^{PS}$	33	$39^{+20}_{-20}$	$D_{1420}$	815.3	$815.0^{+9.9}_{-9.7}$	$f_{2000}^{143}$	30.5	$31^{+6}_{-5}$
$A_{217}^{PS}$	97.5	$96^{+20}_{-20}$	$D_{2000}$	229.99	$229.9^{+3.4}_{-3.4}$	$f_{2000}^{143 \times 217}$	33.01	$33^{+4}_{-4}$
$A^{kSZ}$	0.0	—	$n_{s,0.002}$	0.9654	$0.9651^{+0.0083}_{-0.0082}$	$f_{2000}^{217}$	106.56	$106.7^{+3.8}_{-3.9}$
$A_{100}^{dustTT}$	7.40	$7.5^{+3.7}_{-3.7}$	$Y_P$	0.245324	$0.24531^{+0.00017}_{-0.00017}$	$\chi_{lowl}^2$	13.42	$13.63 (\nu: 0.5)$
$A_{143}^{dustTT}$	9.03	$9.1^{+3.5}_{-3.6}$	$Y_P^{BBN}$	0.246650	$0.24664^{+0.00017}_{-0.00017}$	$\chi_{plik}^2$	767.0	$779.7 (\nu: 15.4)$
$A_{143 \times 217}^{dustTT}$	17.8	$17.2^{+8.1}_{-8.5}$	$10^5 D/H$	2.621	$2.624^{+0.074}_{-0.073}$	$\chi_{6DF}^2$	0.047	$0.09 (\nu: 0.0)$
$A_{217}^{dustTT}$	82.0	$82^{+10}_{-10}$	Age/Gyr	13.811	$13.812^{+0.055}_{-0.055}$	$\chi_{MGS}^2$	1.10	$1.17 (\nu: 0.1)$
$c_{100}$	0.99794	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1090.06	$1090.08^{+0.59}_{-0.57}$	$\chi_{DR11CMass}^2$	2.59	$3.03 (\nu: 0.4)$
$c_{217}$	0.99600	$0.9960^{+0.0029}_{-0.0028}$	$r_*$	144.71	$144.72^{+0.63}_{-0.63}$	$\chi_{DR11LOWZ}^2$	0.82	$0.96 (\nu: 0.2)$
$H_0$	67.44	$67.4^{+1.1}_{-1.1}$	$100\theta_*$	1.04112	$1.04111^{+0.00081}_{-0.00079}$	$\chi_{prior}^2$	2.5	$8.8 (\nu: 8.3)$
$\Omega_\Lambda$	0.6872	$0.687^{+0.015}_{-0.015}$	$D_A/Gpc$	13.899	$13.901^{+0.061}_{-0.062}$	$\chi_{BAO}^2$	4.55	$5.2 (\nu: 0.8)$
$\Omega_m$	0.3128	$0.313^{+0.015}_{-0.014}$	$z_{drag}$	1059.51	$1059.49^{+0.86}_{-0.83}$	$\chi_{CMB}^2$	780.4	$793.3 (\nu: 14.6)$
$\Omega_m h^2$	0.14225	$0.1422^{+0.0024}_{-0.0024}$	$r_{drag}$	147.43	$147.45^{+0.69}_{-0.69}$			

Best-fit  $\chi_{eff}^2 = 787.47$ ;  $\bar{\chi}_{eff}^2 = 807.37$ ;  $R - 1 = 0.01084$

$\chi_{eff}^2$ : BAO - 6DF: 0.05 MGS: 1.10 DR11CMass: 2.59 DR11LOWZ: 0.82 CMB - commander\_rc2\_v1.1\_l2\_29\_B: 13.42 plik\_dx11dr2\_HM\_v18\_TT: 767.00



## 2.80 base\_plikHM\_TT\_lowl\_reion\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022235	$0.02222^{+0.00038}_{-0.00038}$	$\sigma_8$	0.8086	$0.810^{+0.016}_{-0.016}$	$z_{\text{eq}}$	3378	$3377^{+56}_{-55}$
$\Omega_c h^2$	0.11912	$0.1191^{+0.0024}_{-0.0023}$	$\sigma_8 \Omega_m^{0.5}$	0.4510	$0.452^{+0.016}_{-0.016}$	$k_{\text{eq}}$	0.010310	$0.01031^{+0.00017}_{-0.00017}$
$100\theta_{\text{MC}}$	1.04098	$1.04095^{+0.00082}_{-0.00080}$	$\sigma_8 \Omega_m^{0.25}$	0.6039	$0.605^{+0.016}_{-0.016}$	$100\theta_{\text{eq}}$	0.8173	$0.818^{+0.010}_{-0.010}$
$\tau$	0.0548	$0.056^{+0.016}_{-0.015}$	$\sigma_8/h^{0.5}$	0.9837	$0.985^{+0.024}_{-0.022}$	$100\theta_{\text{s,eq}}$	0.4516	$0.4517^{+0.0053}_{-0.0053}$
$\ln(10^{10} A_s)$	3.0430	$3.046^{+0.035}_{-0.032}$	$\langle d^2 \rangle^{1/2}$	2.433	$2.437^{+0.058}_{-0.054}$	$r_{\text{drag}}/D_V(0.57)$	0.07162	$0.07162^{+0.00081}_{-0.00078}$
$n_s$	0.9660	$0.9658^{+0.0081}_{-0.0082}$	$z_{\text{re}}$	7.75	$< 9.38$	$H(0.57)$	92.97	$92.96^{+0.52}_{-0.50}$
$y_{\text{cal}}$	1.00059	$1.0006^{+0.0051}_{-0.0048}$	$10^9 A_s$	2.097	$2.103^{+0.074}_{-0.068}$	$D_A(0.57)$	1388.3	$1388^{+14}_{-15}$
$A_{217}^{\text{CIB}}$	67.9	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8790	$1.878^{+0.023}_{-0.022}$	$F_{\text{AP}}(0.57)$	0.67590	$0.6759^{+0.0036}_{-0.0036}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1227.6	$1229^{+25}_{-25}$	$f\sigma_8(0.57)$	0.4700	$0.471^{+0.011}_{-0.011}$
$A_{143}^{\text{tSZ}}$	7.14	$4.9^{+3.8}_{-3.8}$	$D_{220}$	5726	$5725^{+79}_{-79}$	$\sigma_8(0.57)$	0.6017	$0.602^{+0.011}_{-0.010}$
$A_{100}^{\text{PS}}$	256	$262^{+50}_{-50}$	$D_{810}$	2536.9	$2536^{+27}_{-26}$	$f_{2000}^{143}$	30.5	$31^{+5}_{-5}$
$A_{143}^{\text{PS}}$	40.5	$45^{+20}_{-10}$	$D_{1420}$	815.8	$815.2^{+9.9}_{-9.7}$	$f_{2000}^{143 \times 217}$	33.01	$33^{+4}_{-4}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{2000}$	230.15	$230.0^{+3.4}_{-3.4}$	$f_{2000}^{217}$	106.56	$106.6^{+3.8}_{-3.9}$
$A_{217}^{\text{PS}}$	97.3	$96^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9660	$0.9658^{+0.0081}_{-0.0082}$	$\chi_{\text{lowl}}^2$	13.33	$13.50 (\nu: 0.4)$
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.245333	$0.24533^{+0.00017}_{-0.00017}$	$\chi_{\text{plik}}^2$	767.2	$780.0 (\nu: 15.6)$
$A_{100}^{\text{dustTT}}$	7.40	$7.5^{+3.7}_{-3.7}$	$Y_{\text{P}}^{\text{BBN}}$	0.246660	$0.24665^{+0.00017}_{-0.00018}$	$\chi_{\text{H070p6}}^2$	0.83	$0.86 (\nu: 0.0)$
$A_{143}^{\text{dustTT}}$	9.04	$9.1^{+3.6}_{-3.6}$	$10^5 D/H$	2.617	$2.619^{+0.074}_{-0.072}$	$\chi_{\text{JLA}}^2$	706.734	$706.78 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.2^{+8.1}_{-8.6}$	$\text{Age/Gyr}$	13.806	$13.807^{+0.054}_{-0.053}$	$\chi_{6\text{DF}}^2$	0.029	$0.064 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$z_*$	1090.01	$1090.03^{+0.57}_{-0.56}$	$\chi_{\text{MGS}}^2$	1.22	$1.29 (\nu: 0.1)$
$c_{100}$	0.99794	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.76	$144.78^{+0.62}_{-0.62}$	$\chi_{\text{DR11CMass}}^2$	2.48	$2.88 (\nu: 0.2)$
$c_{217}$	0.99604	$0.9960^{+0.0029}_{-0.0028}$	$100\theta_*$	1.04117	$1.04115^{+0.00080}_{-0.00080}$	$\chi_{\text{DR11LOWZ}}^2$	0.67	$0.79 (\nu: 0.2)$
$H_0$	67.57	$67.6^{+1.1}_{-1.0}$	$D_A/\text{Gpc}$	13.904	$13.906^{+0.061}_{-0.060}$	$\chi_{\text{prior}}^2$	2.6	$8.9 (\nu: 8.5)$
$\Omega_\Lambda$	0.6890	$0.689^{+0.014}_{-0.014}$	$z_{\text{drag}}$	1059.55	$1059.53^{+0.88}_{-0.87}$	$\chi_{\text{BAO}}^2$	4.40	$5.03 (\nu: 0.5)$
$\Omega_m$	0.3110	$0.311^{+0.014}_{-0.014}$	$r_{\text{drag}}$	147.48	$147.50^{+0.68}_{-0.68}$	$\chi_{\text{CMB}}^2$	780.5	$793.5 (\nu: 14.8)$
$\Omega_m h^2$	0.14200	$0.1420^{+0.0023}_{-0.0023}$	$k_{\text{D}}$	0.14036	$0.14033^{+0.00089}_{-0.00089}$			
$\Omega_m h^3$	0.09595	$0.09591^{+0.00089}_{-0.00089}$	$100\theta_{\text{D}}$	0.16098	$0.16100^{+0.00052}_{-0.00050}$			

Best-fit  $\chi_{\text{eff}}^2 = 1495.13$ ;  $\bar{\chi}_{\text{eff}}^2 = 1515.03$ ;  $R - 1 = 0.01183$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.03 MGS: 1.22 DR11CMass: 2.48 DR11LOWZ: 0.67 CMB - commander\_rc2\_v1.1\_l2\_29\_B: 13.33 plik\_dx11dr2\_HM\_v18\_TT: 767.21 Hubble - H070p6: 0.83 SN - JLA December\_2013: 706.73

## 2.81 base\_plikHM\_TTTEEE\_lowl\_reion

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022179	$0.02218^{+0.00029}_{-0.00029}$	$A_{100 \times 217}^{\text{dustTE}}$	0.304	$0.30^{+0.16}_{-0.16}$	$10^5 \text{D/H}$	2.627	$2.628^{+0.057}_{-0.056}$
$\Omega_c h^2$	0.12068	$0.1206^{+0.0027}_{-0.0027}$	$A_{143}^{\text{dustTE}}$	0.156	$0.16^{+0.11}_{-0.11}$	Age/Gyr	13.8268	$13.826^{+0.047}_{-0.049}$
$100\theta_{\text{MC}}$	1.04068	$1.04068^{+0.00062}_{-0.00062}$	$A_{143 \times 217}^{\text{dustTE}}$	0.341	$0.34^{+0.16}_{-0.16}$	$z_*$	1090.22	$1090.21^{+0.55}_{-0.54}$
$\tau$	0.0544	$0.056^{+0.016}_{-0.014}$	$A_{217}^{\text{dustTE}}$	1.688	$1.68^{+0.49}_{-0.49}$	$r_*$	144.40	$144.42^{+0.60}_{-0.59}$
$\ln(10^{10} A_s)$	3.0460	$3.050^{+0.033}_{-0.030}$	$c_{100}$	0.99816	$0.9982^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04088	$1.04089^{+0.00062}_{-0.00061}$
$n_s$	0.9618	$0.9617^{+0.0088}_{-0.0088}$	$c_{217}$	0.99613	$0.9961^{+0.0029}_{-0.0028}$	$D_A/\text{Gpc}$	13.873	$13.875^{+0.055}_{-0.056}$
$y_{\text{cal}}$	1.00040	$1.0007^{+0.0048}_{-0.0048}$	$H_0$	66.88	$66.9^{+1.2}_{-1.2}$	$z_{\text{drag}}$	1059.55	$1059.54^{+0.59}_{-0.59}$
$A_{217}^{\text{CIB}}$	68.1	$65^{+10}_{-10}$	$\Omega_\Lambda$	0.6791	$0.680^{+0.017}_{-0.017}$	$r_{\text{drag}}$	147.12	$147.15^{+0.59}_{-0.59}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m$	0.3209	$0.320^{+0.017}_{-0.017}$	$k_D$	0.14069	$0.14066^{+0.00063}_{-0.00062}$
$A_{143}^{\text{tSZ}}$	7.20	$5.2^{+3.7}_{-3.8}$	$\Omega_m h^2$	0.14351	$0.1434^{+0.0026}_{-0.0025}$	$100\theta_D$	0.160965	$0.16097^{+0.00036}_{-0.00035}$
$A_{100}^{\text{PS}}$	259	$264^{+50}_{-50}$	$\Omega_m h^3$	0.09597	$0.09596^{+0.00057}_{-0.00058}$	$z_{\text{eq}}$	3414	$3412^{+61}_{-60}$
$A_{143}^{\text{PS}}$	40.1	$45^{+10}_{-20}$	$\sigma_8$	0.8137	$0.815^{+0.015}_{-0.014}$	$k_{\text{eq}}$	0.010420	$0.01041^{+0.00019}_{-0.00018}$
$A_{143 \times 217}^{\text{PS}}$	34	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4609	$0.461^{+0.018}_{-0.017}$	$100\theta_{\text{eq}}$	0.8105	$0.811^{+0.012}_{-0.011}$
$A_{217}^{\text{PS}}$	97.1	$97^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6124	$0.613^{+0.016}_{-0.016}$	$100\theta_{s,\text{eq}}$	0.4481	$0.4483^{+0.0059}_{-0.0058}$
$A^{\text{kSZ}}$	0.00	$< 8.27$	$\sigma_8/h^{0.5}$	0.9950	$0.996^{+0.023}_{-0.023}$	$r_{\text{drag}}/D_V(0.57)$	0.07107	$0.07110^{+0.00091}_{-0.00088}$
$A_{100}^{\text{dustTT}}$	7.46	$7.5^{+3.7}_{-3.7}$	$\langle d^2 \rangle^{1/2}$	2.462	$2.466^{+0.057}_{-0.057}$	$H(0.57)$	92.70	$92.71^{+0.52}_{-0.49}$
$A_{143}^{\text{dustTT}}$	9.04	$9.0^{+3.6}_{-3.6}$	$z_{\text{re}}$	7.74	$< 9.31$	$D_A(0.57)$	1397.4	$1397^{+16}_{-16}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.2}_{-8.1}$	$10^9 A_s$	2.103	$2.112^{+0.069}_{-0.064}$	$F_{\text{AP}}(0.57)$	0.67839	$0.6783^{+0.0043}_{-0.0042}$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8862	$1.887^{+0.023}_{-0.023}$	$f\sigma_8(0.57)$	0.4754	$0.476^{+0.011}_{-0.011}$
$A_{100}^{\text{dustEE}}$	0.0809	$0.081^{+0.011}_{-0.011}$	$D_{40}$	1237.9	$1240^{+26}_{-26}$	$\sigma_8(0.57)$	0.6031	$0.604^{+0.010}_{-0.0095}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0484	$0.0484^{+0.0099}_{-0.0099}$	$D_{220}$	5727	$5732^{+75}_{-78}$	$f_{2000}^{143}$	30.4	$31^{+5}_{-5}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.0996^{+0.064}_{-0.064}$	$D_{810}$	2537.9	$2539^{+26}_{-26}$	$f_{2000}^{143 \times 217}$	33.07	$33.1^{+3.6}_{-3.6}$
$A_{143}^{\text{dustEE}}$	0.09998	$0.0998^{+0.013}_{-0.014}$	$D_{1420}$	814.9	$815.0^{+9.3}_{-9.4}$	$f_{2000}^{217}$	106.61	$106.6^{+3.6}_{-3.5}$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.224^{+0.092}_{-0.093}$	$D_{2000}$	229.84	$229.9^{+3.1}_{-3.1}$	$\chi_{\text{lowl}}^2$	14.28	$14.5 (\nu: 0.6)$
$A_{217}^{\text{dustEE}}$	0.650	$0.65^{+0.26}_{-0.25}$	$n_{s,0.002}$	0.9618	$0.9617^{+0.0088}_{-0.0088}$	$\chi_{\text{plik}}^2$	2434.8	$2453.2 (\nu: 21.9)$
$A_{100}^{\text{dustTE}}$	0.140	$0.142^{+0.074}_{-0.074}$	$Y_P$	0.245307	$0.24531^{+0.00013}_{-0.00014}$	$\chi_{\text{prior}}^2$	7.5	$21 (\nu: 16.7)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.132^{+0.057}_{-0.057}$	$Y_P^{\text{BBN}}$	0.246633	$0.24663^{+0.00013}_{-0.00014}$	$\chi_{\text{CMB}}^2$	2449.1	$2467.6 (\nu: 21.6)$

Best-fit  $\chi_{\text{eff}}^2 = 2456.59$ ;  $\bar{\chi}_{\text{eff}}^2 = 2488.39$ ;  $R - 1 = 0.00812$

$\chi_{\text{eff}}^2$ : CMB - commander\_rc2\_v1.1\_l2\_29\_B: 14.28 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2434.81

## 2.82 base\_plikHM\_TTTEEE\_lowl\_reion\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022253	$0.02224^{+0.00027}_{-0.00027}$	$A_{143 \times 217}^{\text{dustTE}}$	0.337	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04100	$1.04099^{+0.00058}_{-0.00058}$
$\Omega_c h^2$	0.11965	$0.1197^{+0.0020}_{-0.0020}$	$A_{217}^{\text{dustTE}}$	1.672	$1.67^{+0.49}_{-0.50}$	$D_A/\text{Gpc}$	13.8916	$13.892^{+0.045}_{-0.045}$
$100\theta_{\text{MC}}$	1.04081	$1.04079^{+0.00059}_{-0.00059}$	$c_{100}$	0.99818	$0.9982^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.63	$1059.61^{+0.60}_{-0.56}$
$\tau$	0.0563	$0.057^{+0.016}_{-0.015}$	$c_{217}$	0.99612	$0.9961^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.316	$147.32^{+0.48}_{-0.49}$
$\ln(10^{10} A_s)$	3.0477	$3.050^{+0.034}_{-0.032}$	$H_0$	67.34	$67.32^{+0.91}_{-0.90}$	$k_D$	0.14054	$0.14053^{+0.00058}_{-0.00057}$
$n_s$	0.9642	$0.9639^{+0.0076}_{-0.0077}$	$\Omega_\Lambda$	0.6857	$0.685^{+0.012}_{-0.013}$	$100\theta_D$	0.160914	$0.16093^{+0.00034}_{-0.00033}$
$y_{\text{cal}}$	1.00049	$1.0007^{+0.0048}_{-0.0048}$	$\Omega_m$	0.3143	$0.315^{+0.013}_{-0.012}$	$z_{\text{eq}}$	3391.0	$3392^{+46}_{-46}$
$A_{217}^{\text{CIB}}$	67.7	$65^{+10}_{-10}$	$\Omega_m h^2$	0.14255	$0.1426^{+0.0019}_{-0.0019}$	$k_{\text{eq}}$	0.010350	$0.01035^{+0.00014}_{-0.00014}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.03	—	$\Omega_m h^3$	0.09599	$0.09597^{+0.00056}_{-0.00058}$	$100\theta_{\text{eq}}$	0.8149	$0.8148^{+0.0087}_{-0.0086}$
$A_{143}^{\text{tSZ}}$	7.21	$5.3^{+3.7}_{-3.9}$	$\sigma_8$	0.8116	$0.813^{+0.015}_{-0.015}$	$100\theta_{s,\text{eq}}$	0.45030	$0.4502^{+0.0044}_{-0.0044}$
$A_{100}^{\text{PS}}$	258	$262^{+60}_{-60}$	$\sigma_8 \Omega_m^{0.5}$	0.4550	$0.456^{+0.014}_{-0.014}$	$r_{\text{drag}}/D_V(0.57)$	0.07142	$0.07140^{+0.00069}_{-0.00068}$
$A_{143}^{\text{PS}}$	39.8	$44^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6077	$0.609^{+0.014}_{-0.014}$	$H(0.57)$	92.887	$92.87^{+0.43}_{-0.41}$
$A_{143 \times 217}^{\text{PS}}$	34	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9890	$0.990^{+0.021}_{-0.020}$	$D_A(0.57)$	1391.2	$1392^{+12}_{-12}$
$A_{217}^{\text{PS}}$	97.2	$97^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.448	$2.453^{+0.052}_{-0.050}$	$F_{\text{AP}}(0.57)$	0.67675	$0.6768^{+0.0032}_{-0.0031}$
$A^{\text{kSZ}}$	0.00	$< 8.28$	$z_{\text{re}}$	7.91	$< 9.42$	$f\sigma_8(0.57)$	0.4726	$0.473^{+0.010}_{-0.0095}$
$A_{100}^{\text{dustTT}}$	7.51	$7.5^{+3.7}_{-3.6}$	$10^9 A_s$	2.107	$2.112^{+0.072}_{-0.067}$	$\sigma_8(0.57)$	0.6030	$0.604^{+0.010}_{-0.0099}$
$A_{143}^{\text{dustTT}}$	9.07	$9.0^{+3.6}_{-3.5}$	$10^9 A_s e^{-2\tau}$	1.8822	$1.883^{+0.021}_{-0.021}$	$f_{2000}^{143}$	30.0	$30^{+5}_{-5}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.2^{+8.2}_{-7.9}$	$D_{40}$	1233.3	$1235^{+24}_{-24}$	$f_{2000}^{143 \times 217}$	32.74	$32.9^{+3.5}_{-3.6}$
$A_{217}^{\text{dustTT}}$	82.3	$82^{+10}_{-10}$	$D_{220}$	5733	$5736^{+74}_{-75}$	$f_{2000}^{217}$	106.34	$106.5^{+3.5}_{-3.6}$
$A_{100}^{\text{dustEE}}$	0.0812	$0.081^{+0.011}_{-0.011}$	$D_{810}$	2537.8	$2538^{+26}_{-26}$	$\chi_{\text{lowl}}^2$	13.82	$14.00 (\nu: 0.4)$
$A_{100 \times 143}^{\text{dustEE}}$	0.0489	$0.0488^{+0.010}_{-0.0099}$	$D_{1420}$	815.6	$815.6^{+9.1}_{-9.3}$	$\chi_{\text{plik}}^2$	2435.4	$2453.4 (\nu: 22.6)$
$A_{100 \times 217}^{\text{dustEE}}$	0.0996	$0.100^{+0.064}_{-0.064}$	$D_{2000}$	230.16	$230.1^{+3.0}_{-3.0}$	$\chi_{6\text{DF}}^2$	0.069	$0.099 (\nu: 0.0)$
$A_{143}^{\text{dustEE}}$	0.1003	$0.100^{+0.013}_{-0.014}$	$n_{s,0.002}$	0.9642	$0.9639^{+0.0076}_{-0.0077}$	$\chi_{\text{MGS}}^2$	0.98	$1.03 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.225^{+0.091}_{-0.094}$	$Y_{\text{P}}$	0.245341	$0.24533^{+0.00012}_{-0.00013}$	$\chi_{\text{DR11CMass}}^2$	2.76	$3.09 (\nu: 0.3)$
$A_{217}^{\text{dustEE}}$	0.649	$0.65^{+0.26}_{-0.25}$	$Y_{\text{P}}^{\text{BBN}}$	0.246668	$0.24666^{+0.00012}_{-0.00013}$	$\chi_{\text{DR11LOWZ}}^2$	0.98	$1.10 (\nu: 0.2)$
$A_{100}^{\text{dustTE}}$	0.142	$0.141^{+0.075}_{-0.074}$	$10^5 \text{D}/\text{H}$	2.613	$2.616^{+0.051}_{-0.050}$	$\chi_{\text{prior}}^2$	7.9	$21 (\nu: 16.5)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.059}_{-0.058}$	$\text{Age}/\text{Gyr}$	13.8113	$13.813^{+0.041}_{-0.042}$	$\chi_{\text{BAO}}^2$	4.80	$5.3 (\nu: 0.7)$
$A_{100 \times 217}^{\text{dustTE}}$	0.302	$0.30^{+0.16}_{-0.16}$	$z_*$	1090.038	$1090.06^{+0.45}_{-0.45}$	$\chi_{\text{CMB}}^2$	2449.2	$2467.4 (\nu: 21.7)$
$A_{143}^{\text{dustTE}}$	0.152	$0.15^{+0.11}_{-0.11}$	$r_*$	144.612	$144.61^{+0.47}_{-0.48}$			

Best-fit  $\chi_{\text{eff}}^2 = 2461.93$ ;  $\bar{\chi}_{\text{eff}}^2 = 2493.79$ ;  $R - 1 = 0.01676$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.07 MGS: 0.98 DR11CMass: 2.76 DR11LOWZ: 0.98 CMB - commander\_rc2\_v1.1\_l2\_29\_B: 13.82 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2435.42

## 2.83 base\_plikHM\_TTTEEE\_lowl\_reion\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022260	$0.02226^{+0.00027}_{-0.00026}$	$A_{217}^{\text{dustTE}}$	1.680	$1.67^{+0.49}_{-0.50}$	$z_{\text{drag}}$	1059.63	$1059.64^{+0.57}_{-0.59}$
$\Omega_c h^2$	0.11951	$0.1195^{+0.0020}_{-0.0020}$	$c_{100}$	0.99821	$0.9982^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.346	$147.36^{+0.48}_{-0.48}$
$100\theta_{\text{MC}}$	1.04082	$1.04082^{+0.00059}_{-0.00058}$	$c_{217}$	0.99604	$0.9961^{+0.0028}_{-0.0028}$	$k_D$	0.14052	$0.14050^{+0.00058}_{-0.00057}$
$\tau$	0.0566	$0.058^{+0.016}_{-0.015}$	$H_0$	67.40	$67.42^{+0.92}_{-0.89}$	$100\theta_D$	0.160910	$0.16091^{+0.00033}_{-0.00033}$
$\ln(10^{10} A_s)$	3.0480	$3.051^{+0.034}_{-0.032}$	$\Omega_\Lambda$	0.6865	$0.687^{+0.012}_{-0.012}$	$z_{\text{eq}}$	3387.8	$3387^{+45}_{-45}$
$n_s$	0.9649	$0.9645^{+0.0075}_{-0.0076}$	$\Omega_m$	0.3135	$0.313^{+0.012}_{-0.012}$	$k_{\text{eq}}$	0.010340	$0.01034^{+0.00014}_{-0.00014}$
$y_{\text{cal}}$	1.00052	$1.0007^{+0.0048}_{-0.0048}$	$\Omega_m h^2$	0.14241	$0.1424^{+0.0019}_{-0.0019}$	$100\theta_{\text{eq}}$	0.8155	$0.8157^{+0.0086}_{-0.0084}$
$A_{217}^{\text{CIB}}$	67.3	$65^{+10}_{-10}$	$\Omega_m h^3$	0.09599	$0.09598^{+0.00056}_{-0.00058}$	$100\theta_{s,\text{eq}}$	0.45060	$0.4507^{+0.0044}_{-0.0043}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.09	—	$\sigma_8$	0.8114	$0.812^{+0.015}_{-0.015}$	$r_{\text{drag}}/D_V(0.57)$	0.07146	$0.07148^{+0.00067}_{-0.00066}$
$A_{143}^{\text{tSZ}}$	7.15	$5.3^{+3.7}_{-3.9}$	$\sigma_8 \Omega_m^{0.5}$	0.4543	$0.454^{+0.014}_{-0.014}$	$H(0.57)$	92.909	$92.92^{+0.41}_{-0.40}$
$A_{100}^{\text{PS}}$	258	$262^{+60}_{-60}$	$\sigma_8 \Omega_m^{0.25}$	0.6071	$0.608^{+0.014}_{-0.013}$	$D_A(0.57)$	1390.4	$1390^{+12}_{-12}$
$A_{143}^{\text{PS}}$	40.8	$44^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9883	$0.989^{+0.021}_{-0.020}$	$F_{\text{AP}}(0.57)$	0.67654	$0.6765^{+0.0031}_{-0.0030}$
$A_{143 \times 217}^{\text{PS}}$	35.7	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.446	$2.449^{+0.052}_{-0.049}$	$f\sigma_8(0.57)$	0.4723	$0.473^{+0.010}_{-0.0096}$
$A_{217}^{\text{PS}}$	98.1	$97^{+20}_{-20}$	$z_{\text{re}}$	7.94	$< 9.45$	$\sigma_8(0.57)$	0.6031	$0.604^{+0.010}_{-0.010}$
$A^{\text{kSZ}}$	0.01	$< 8.27$	$10^9 A_s$	2.107	$2.113^{+0.072}_{-0.068}$	$f_{2000}^{143}$	29.9	$30^{+5}_{-5}$
$A_{100}^{\text{dustTT}}$	7.46	$7.6^{+3.7}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8816	$1.882^{+0.021}_{-0.021}$	$f_{2000}^{143 \times 217}$	32.69	$32.8^{+3.5}_{-3.6}$
$A_{143}^{\text{dustTT}}$	9.02	$9.0^{+3.6}_{-3.5}$	$D_{40}$	1231.8	$1234^{+23}_{-24}$	$f_{2000}^{217}$	106.22	$106.4^{+3.5}_{-3.6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.1}_{-7.9}$	$D_{220}$	5732	$5737^{+74}_{-74}$	$\chi_{\text{lowl}}^2$	13.68	$13.89 (\nu: 0.4)$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$D_{810}$	2537.9	$2538^{+26}_{-25}$	$\chi_{\text{plik}}^2$	2435.8	$2453.6 (\nu: 22.8)$
$A_{100}^{\text{dustEE}}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	815.9	$815.8^{+9.1}_{-9.3}$	$\chi_{\text{H070p6}}^2$	0.92	$0.93 (\nu: 0.0)$
$A_{100 \times 143}^{\text{dustEE}}$	0.0488	$0.049^{+0.010}_{-0.010}$	$D_{2000}$	230.28	$230.2^{+3.0}_{-3.0}$	$\chi_{\text{JLA}}^2$	706.810	$706.83 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.100^{+0.063}_{-0.064}$	$n_{s,0.002}$	0.9649	$0.9645^{+0.0075}_{-0.0076}$	$\chi_{6\text{DF}}^2$	0.058	$0.079 (\nu: 0.0)$
$A_{143}^{\text{dustEE}}$	0.1002	$0.100^{+0.013}_{-0.014}$	$Y_{\text{P}}$	0.245344	$0.24534^{+0.00012}_{-0.00012}$	$\chi_{\text{MGS}}^2$	1.04	$1.12 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dustEE}}$	0.225	$0.225^{+0.091}_{-0.095}$	$Y_{\text{P}}^{\text{BBN}}$	0.246670	$0.24667^{+0.00012}_{-0.00012}$	$\chi_{\text{DR11CMAS}}^2$	2.68	$2.94 (\nu: 0.2)$
$A_{217}^{\text{dustEE}}$	0.652	$0.65^{+0.26}_{-0.25}$	$10^5 D/H$	2.612	$2.612^{+0.050}_{-0.051}$	$\chi_{\text{DR11LOWZ}}^2$	0.91	$0.96 (\nu: 0.2)$
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.075}_{-0.074}$	Age/Gyr	13.8097	$13.809^{+0.040}_{-0.040}$	$\chi_{\text{prior}}^2$	7.8	$21 (\nu: 16.5)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.059}_{-0.058}$	$z_*$	1090.018	$1090.01^{+0.44}_{-0.44}$	$\chi_{\text{BAO}}^2$	4.68	$5.10 (\nu: 0.5)$
$A_{100 \times 217}^{\text{dustTE}}$	0.301	$0.30^{+0.16}_{-0.16}$	$r_*$	144.642	$144.66^{+0.46}_{-0.47}$	$\chi_{\text{CMB}}^2$	2449.5	$2467.5 (\nu: 21.8)$
$A_{143}^{\text{dustTE}}$	0.154	$0.15^{+0.11}_{-0.11}$	$100\theta_*$	1.04101	$1.04102^{+0.00059}_{-0.00057}$			
$A_{143 \times 217}^{\text{dustTE}}$	0.340	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.8944	$13.896^{+0.045}_{-0.044}$			

Best-fit  $\chi_{\text{eff}}^2 = 3169.73$ ;  $\bar{\chi}_{\text{eff}}^2 = 3201.55$ ;  $R - 1 = 0.02083$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.06 MGS: 1.04 DR11CMAS: 2.68 DR11LOWZ: 0.91 CMB - commander\_rc2.v1.1\_l2\_29\_B: 13.68 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2435.80 Hubble -

## 2.84 base\_CamSpecHM\_TT\_lowl\_reion

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02213^{+0.00042}_{-0.00043} (+0.0\sigma)$	$H_0$	$66.9^{+1.8}_{-1.8} (+0.1\sigma)$	$100\theta_*$	$1.04100^{+0.00095}_{-0.00094} (+0.1\sigma)$
$\Omega_c h^2$	$0.1206^{+0.0040}_{-0.0040} (-0.1\sigma)$	$\Omega_\Lambda$	$0.680^{+0.024}_{-0.026} (+0.1\sigma)$	$z_{\text{drag}}$	$1059.40^{+0.88}_{-0.86} (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04078^{+0.00096}_{-0.00095} (+0.1\sigma)$	$\Omega_m$	$0.320^{+0.026}_{-0.024} (-0.1\sigma)$	$r_{\text{drag}}$	$147.21^{+0.94}_{-0.89} (+0.1\sigma)$
$\tau$	$< 0.0703 (+0.1\sigma)$	$\Omega_m h^2$	$0.1434^{+0.0038}_{-0.0038} (-0.1\sigma)$	$k_D$	$0.14057^{+0.00098}_{-0.0010} (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.045^{+0.034}_{-0.031} (-0.1\sigma)$	$\Omega_m h^3$	$0.09591^{+0.00088}_{-0.00087} (+0.0\sigma)$	$100\theta_D$	$0.16104^{+0.00052}_{-0.00050} (-0.1\sigma)$
$n_s$	$0.964^{+0.011}_{-0.011} (+0.4\sigma)$	$\sigma_8$	$0.814^{+0.018}_{-0.017} (-0.1\sigma)$	$z_{\text{eq}}$	$3410^{+91}_{-91} (-0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0049} (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.461^{+0.025}_{-0.025} (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.811^{+0.017}_{-0.017} (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$249^{+40}_{-40} (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.612^{+0.022}_{-0.023} (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0711^{+0.0014}_{-0.0013} (+0.1\sigma)$
$A_{143}^{\text{PS}}$	$41^{+10}_{-10} (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.995^{+0.031}_{-0.031} (-0.1\sigma)$	$H(0.57)$	$92.71^{+0.77}_{-0.73} (+0.1\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} (+0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.455^{+0.074}_{-0.072} (-0.2\sigma)$	$D_A(0.57)$	$1397^{+24}_{-24} (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} (-2.7\sigma)$	$z_{\text{re}}$	$< 9.28 (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6783^{+0.0064}_{-0.0062} (-0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.47 (-0.9\sigma)$	$10^9 A_s$	$2.101^{+0.072}_{-0.065} (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.475^{+0.014}_{-0.015} (-0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.026}_{-0.026} (-0.4\sigma)$	$\sigma_8(0.57)$	$0.603^{+0.011}_{-0.010} (-0.0\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1228^{+30}_{-29} (-0.5\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24620^{+0.00018}_{-0.00019} (-4.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5695^{+82}_{-78} (-0.5\sigma)$	$f_{2000}^{143}$	$30^{+5}_{-5} (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$D_{810}$	$2532^{+27}_{-27} (-0.3\sigma)$	$f_{2000}^{217}$	$107.2^{+3.8}_{-3.8} (+0.2\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	$814^{+10}_{-9.9} (-0.1\sigma)$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4} (-0.3\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$n_{\text{s},0.002}$	$0.964^{+0.011}_{-0.011} (+0.4\sigma)$	$\chi_{\text{lowl}}^2$	$13.7 (\nu: 0.7) (-0.5\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.35}$	$Y_{\text{P}}$	$0.24487^{+0.00018}_{-0.00018} (-4.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.4 (\nu: 16.9)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	$\text{Age/Gyr}$	$13.828^{+0.071}_{-0.072} (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$9.7 (\nu: 7.9) (+0.3\sigma)$
$c_{217}$	$0.9974^{+0.0034}_{-0.0035} (+0.9\sigma)$	$z_*$	$1090.26^{+0.80}_{-0.78} (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$8075.1 (\nu: 16.4) (+1347.2\sigma)$
$\beta_1^1$	$0.0^{+2.0}_{-2.0}$	$r_*$	$144.47^{+0.93}_{-0.90} (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 8084.85; \Delta \bar{\chi}_{\text{eff}}^2 = 7282.75; R - 1 = 0.00740$$

## 2.85 base\_CamSpecHM\_TT\_lowl\_reion\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02221^{+0.00036}_{-0.00037} (+0.0\sigma)$	$\Omega_m$	$0.313^{+0.015}_{-0.014} (-0.1\sigma)$	$100\theta_D$	$0.16100^{+0.00050}_{-0.00049} (-0.1\sigma)$
$\Omega_c h^2$	$0.1193^{+0.0025}_{-0.0025} (-0.0\sigma)$	$\Omega_m h^2$	$0.1422^{+0.0024}_{-0.0024} (-0.0\sigma)$	$z_{\text{eq}}$	$3383^{+57}_{-57} (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04096^{+0.00085}_{-0.00083} (+0.1\sigma)$	$\Omega_m h^3$	$0.09592^{+0.00089}_{-0.00087} (+0.1\sigma)$	$100\theta_{\text{eq}}$	$0.816^{+0.011}_{-0.010} (+0.0\sigma)$
$\tau$	$0.057^{+0.016}_{-0.015} (+0.1\sigma)$	$\sigma_8$	$0.810^{+0.016}_{-0.016} (-0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07154^{+0.00081}_{-0.00080} (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.044^{+0.035}_{-0.032} (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.017}_{-0.016} (-0.0\sigma)$	$H(0.57)$	$92.92^{+0.52}_{-0.50} (+0.1\sigma)$
$n_s$	$0.9668^{+0.0084}_{-0.0084} (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.016}_{-0.016} (-0.0\sigma)$	$D_A(0.57)$	$1390^{+15}_{-15} (-0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0049} (-0.1\sigma)$	$\sigma_8/h^{0.5}$	$0.987^{+0.024}_{-0.022} (-0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.6763^{+0.0037}_{-0.0036} (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$249^{+40}_{-40} (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.436^{+0.058}_{-0.054} (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.471^{+0.011}_{-0.011} (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$40^{+10}_{-10} (-0.6\sigma)$	$z_{\text{re}}$	$< 9.39 (+0.1\sigma)$	$\sigma_8(0.57)$	$0.603^{+0.011}_{-0.010} (-0.0\sigma)$
$A_{217}^{\text{PS}}$	$96^{+30}_{-30} (-0.0\sigma)$	$10^9 A_s$	$2.100^{+0.074}_{-0.068} (-0.1\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24623^{+0.00016}_{-0.00016} (-4.5\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.023}_{-0.022} (-0.4\sigma)$	$f_{2000}^{143}$	$30^{+5}_{-5} (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.42 (-0.9\sigma)$	$D_{40}$	$1223^{+25}_{-25} (-0.6\sigma)$	$f_{2000}^{217}$	$107.1^{+3.7}_{-3.9} (+0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{220}$	$5700^{+81}_{-78} (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4} (-0.3\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2531^{+27}_{-26} (-0.3\sigma)$	$\chi_{\text{lowl}}^2$	$13.15 (\nu: 0.4) (-0.5\sigma)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$814^{+10}_{-9.9} (-0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.6 (\nu: 16.4)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$n_{\text{s},0.002}$	$0.9668^{+0.0084}_{-0.0084} (+0.4\sigma)$	$\chi_{6\text{DF}}^2$	$0.081 (\nu: 0.0) (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.37}_{-0.37}$	$Y_{\text{P}}$	$0.24490^{+0.00016}_{-0.00015} (-4.6\sigma)$	$\chi_{\text{MGS}}^2$	$1.20 (\nu: 0.1) (+0.1\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.22}$	$\text{Age}/\text{Gyr}$	$13.810^{+0.054}_{-0.057} (-0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.99 (\nu: 0.3) (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.35}$	$z_*$	$1090.06^{+0.58}_{-0.58} (-0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.92 (\nu: 0.2) (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0018}_{-0.0019} (-1.4\sigma)$	$r_*$	$144.73^{+0.65}_{-0.63} (+0.0\sigma)$	$\chi_{\text{prior}}^2$	$9.98 (\nu: 8.0) (+0.3\sigma)$
$c_{217}$	$0.9974^{+0.0034}_{-0.0034} (+1.0\sigma)$	$100\theta_*$	$1.04117^{+0.00084}_{-0.00082} (+0.1\sigma)$	$\chi_{\text{BAO}}^2$	$5.2 (\nu: 0.7) (-0.0\sigma)$
$\beta_1^1$	$0.0^{+1.9}_{-1.9}$	$z_{\text{drag}}$	$1059.49^{+0.83}_{-0.85} (-0.0\sigma)$	$\chi_{\text{CMB}}^2$	$8074.7 (\nu: 15.7) (+1347.3\sigma)$
$H_0$	$67.5^{+1.1}_{-1.1} (+0.1\sigma)$	$r_{\text{drag}}$	$147.45^{+0.70}_{-0.67} (+0.0\sigma)$		
$\Omega_\Lambda$	$0.687^{+0.014}_{-0.015} (+0.1\sigma)$	$k_{\text{D}}$	$0.14038^{+0.00086}_{-0.00088} (+0.0\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 8089.89; \Delta \bar{\chi}_{\text{eff}}^2 = 7282.52; R - 1 = 0.01435$$

## 2.86 base\_CamSpecHM\_TT\_lowl\_reion\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02223^{+0.00037}_{-0.00037} (+0.0\sigma)$	$\Omega_m$	$0.311^{+0.014}_{-0.013} (-0.1\sigma)$	$100\theta_D$	$0.16098^{+0.00050}_{-0.00048} (-0.1\sigma)$
$\Omega_c h^2$	$0.1191^{+0.0024}_{-0.0023} (-0.0\sigma)$	$\Omega_m h^2$	$0.1419^{+0.0023}_{-0.0023} (-0.0\sigma)$	$z_{\text{eq}}$	$3376^{+55}_{-56} (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04100^{+0.00085}_{-0.00084} (+0.1\sigma)$	$\Omega_m h^3$	$0.09594^{+0.00091}_{-0.00088} (+0.1\sigma)$	$100\theta_{\text{eq}}$	$0.818^{+0.010}_{-0.010} (+0.0\sigma)$
$\tau$	$0.057^{+0.016}_{-0.015} (+0.1\sigma)$	$\sigma_8$	$0.810^{+0.016}_{-0.016} (-0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07165^{+0.00076}_{-0.00078} (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.044^{+0.036}_{-0.033} (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.016}_{-0.016} (-0.0\sigma)$	$H(0.57)$	$92.98^{+0.51}_{-0.49} (+0.1\sigma)$
$n_s$	$0.9675^{+0.0082}_{-0.0081} (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.016}_{-0.015} (-0.0\sigma)$	$D_A(0.57)$	$1388^{+14}_{-14} (-0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0049} (-0.1\sigma)$	$\sigma_8/h^{0.5}$	$0.985^{+0.024}_{-0.022} (-0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.6758^{+0.0036}_{-0.0034} (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$249^{+40}_{-40} (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.431^{+0.058}_{-0.054} (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.470^{+0.011}_{-0.011} (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$40^{+10}_{-10} (-0.6\sigma)$	$z_{\text{re}}$	$< 9.45 (+0.1\sigma)$	$\sigma_8(0.57)$	$0.602^{+0.011}_{-0.011} (+0.0\sigma)$
$A_{217}^{\text{PS}}$	$96^{+30}_{-30} (-0.0\sigma)$	$10^9 A_s$	$2.100^{+0.075}_{-0.069} (-0.1\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24624^{+0.00016}_{-0.00016} (-4.6\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.023}_{-0.023} (-0.4\sigma)$	$f_{2000}^{143}$	$30^{+5}_{-6} (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.42 (-1.0\sigma)$	$D_{40}$	$1221^{+25}_{-25} (-0.6\sigma)$	$f_{2000}^{217}$	$107.0^{+3.7}_{-3.9} (+0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{220}$	$5702^{+81}_{-78} (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} (-0.3\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2531^{+27}_{-25} (-0.3\sigma)$	$\chi_{\text{lowl}}^2$	$13.03 (\nu: 0.4) (-0.5\sigma)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$815^{+10}_{-9.9} (-0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.8 (\nu: 16.5)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$n_{\text{s},0.002}$	$0.9675^{+0.0082}_{-0.0081} (+0.4\sigma)$	$\chi_{\text{H070p6}}^2$	$0.84 (\nu: 0.0) (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.37}_{-0.38}$	$Y_{\text{P}}$	$0.24491^{+0.00016}_{-0.00015} (-4.6\sigma)$	$\chi_{\text{JLA}}^2$	$706.77 (\nu: 0.0) (-0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.22}$	$\text{Age}/\text{Gyr}$	$13.805^{+0.054}_{-0.055} (-0.1\sigma)$	$\chi_{6\text{DF}}^2$	$0.061 (\nu: 0.0) (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.35}$	$z_*$	$1090.00^{+0.58}_{-0.57} (-0.1\sigma)$	$\chi_{\text{MGS}}^2$	$1.32 (\nu: 0.1) (+0.1\sigma)$
$c_{100}$	$0.9968^{+0.0018}_{-0.0019} (-1.4\sigma)$	$r_*$	$144.79^{+0.63}_{-0.60} (+0.0\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.86 (\nu: 0.2) (-0.0\sigma)$
$c_{217}$	$0.9974^{+0.0034}_{-0.0034} (+1.0\sigma)$	$100\theta_*$	$1.04121^{+0.00084}_{-0.00082} (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.76 (\nu: 0.2) (-0.1\sigma)$
$\beta_1^1$	$0.0^{+1.9}_{-1.9}$	$z_{\text{drag}}$	$1059.53^{+0.83}_{-0.84} (-0.0\sigma)$	$\chi_{\text{prior}}^2$	$10.1 (\nu: 8.1) (+0.3\sigma)$
$H_0$	$67.6^{+1.0}_{-1.0} (+0.1\sigma)$	$r_{\text{drag}}$	$147.50^{+0.69}_{-0.66} (+0.0\sigma)$	$\chi_{\text{BAO}}^2$	$5.00 (\nu: 0.4) (-0.0\sigma)$
$\Omega_\Lambda$	$0.689^{+0.013}_{-0.014} (+0.1\sigma)$	$k_D$	$0.14034^{+0.00085}_{-0.00088} (+0.0\sigma)$	$\chi_{\text{CMB}}^2$	$8074.9 (\nu: 15.7) (+1336.7\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 8797.52; \Delta \bar{\chi}_{\text{eff}}^2 = 7282.49; R - 1 = 0.01620$$

## 2.87 base\_CamSpecHM\_TTTEEE\_lowl\_reion

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02229^{+0.00030}_{-0.00030} \quad (+0.7\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.04096^{+0.00057}_{-0.00058} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1198^{+0.0027}_{-0.0026} \quad (-0.6\sigma)$	$H_0$	$67.3^{+1.2}_{-1.2} \quad (+0.6\sigma)$	$z_{\text{drag}}$	$1059.71^{+0.64}_{-0.62} \quad (+0.6\sigma)$
$100\theta_{\text{MC}}$	$1.04076^{+0.00058}_{-0.00059} \quad (+0.2\sigma)$	$\Omega_\Lambda$	$0.685^{+0.016}_{-0.017} \quad (+0.6\sigma)$	$r_{\text{drag}}$	$147.24^{+0.60}_{-0.60} \quad (+0.3\sigma)$
$\tau$	$0.056^{+0.015}_{-0.014} \quad (-0.0\sigma)$	$\Omega_m$	$0.315^{+0.017}_{-0.016} \quad (-0.6\sigma)$	$k_D$	$0.14067^{+0.00064}_{-0.00064} \quad (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.045^{+0.033}_{-0.031} \quad (-0.3\sigma)$	$\Omega_m h^2$	$0.1427^{+0.0026}_{-0.0025} \quad (-0.5\sigma)$	$100\theta_D$	$0.16084^{+0.00036}_{-0.00036} \quad (-0.7\sigma)$
$n_s$	$0.9655^{+0.0086}_{-0.0085} \quad (+0.8\sigma)$	$\Omega_m h^3$	$0.09606^{+0.00059}_{-0.00058} \quad (+0.3\sigma)$	$z_{\text{eq}}$	$3396^{+61}_{-59} \quad (-0.5\sigma)$
$y_{\text{cal}}$	$1.0004^{+0.0049}_{-0.0048} \quad (-0.1\sigma)$	$\sigma_8$	$0.811^{+0.015}_{-0.015} \quad (-0.5\sigma)$	$100\theta_{\text{eq}}$	$0.814^{+0.011}_{-0.011} \quad (+0.6\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.017}_{-0.017} \quad (-0.6\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07137^{+0.00089}_{-0.00089} \quad (+0.6\sigma)$
$A_{143}^{\text{PS}}$	$40^{+10}_{-10} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.016}_{-0.016} \quad (-0.6\sigma)$	$H(0.57)$	$92.89^{+0.51}_{-0.50} \quad (+0.7\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.989^{+0.024}_{-0.023} \quad (-0.6\sigma)$	$D_A(0.57)$	$1392^{+16}_{-16} \quad (-0.6\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.444^{+0.056}_{-0.055} \quad (-0.8\sigma)$	$F_{\text{AP}}(0.57)$	$0.6770^{+0.0042}_{-0.0041} \quad (-0.6\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.61 \quad (-1.1\sigma)$	$z_{\text{re}}$	$< 9.27 \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.473^{+0.011}_{-0.011} \quad (-0.6\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.22}$	$10^9 A_s$	$2.101^{+0.070}_{-0.064} \quad (-0.3\sigma)$	$\sigma_8(0.57)$	$0.603^{+0.010}_{-0.0098} \quad (-0.3\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.878^{+0.022}_{-0.022} \quad (-0.8\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24627^{+0.00013}_{-0.00013} \quad (-5.3\sigma)$
$A^{\text{kSZ}}$	—	$D_{40}$	$1227^{+25}_{-25} \quad (-1.0\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{220}$	$5713^{+78}_{-74} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.7^{+3.5}_{-3.6} \quad (+0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.35}_{-0.36}$	$D_{810}$	$2533^{+26}_{-26} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.6\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.23}$	$D_{1420}$	$815.0^{+9.5}_{-9.3} \quad (-0.0\sigma)$	$\chi_{\text{lowl}}^2$	$13.45 \quad (\nu: 0.4) \quad (-0.9\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.36}$	$n_{s,0.002}$	$0.9655^{+0.0086}_{-0.0085} \quad (+0.8\sigma)$	$\chi_{\text{CamSpec}}^2$	$12954.2 \quad (\nu: 17.6)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_{\text{P}}$	$0.24494^{+0.00013}_{-0.00012} \quad (-5.3\sigma)$	$\chi_{\text{prior}}^2$	$10.4 \quad (\nu: 7.9) \quad (-1.8\sigma)$
$c_{217}$	$0.9972^{+0.0035}_{-0.0035} \quad (+0.7\sigma)$	$\text{Age/Gyr}$	$13.810^{+0.047}_{-0.048} \quad (-0.7\sigma)$	$\chi_{\text{CMB}}^2$	$12967.6 \quad (\nu: 17.2) \quad (+1596.1\sigma)$
$c_{TE}$	$1.0056^{+0.0085}_{-0.0086}$	$z_*$	$1089.99^{+0.55}_{-0.53} \quad (-0.8\sigma)$		
$c_{EE}$	$1.0015^{+0.0082}_{-0.0082}$	$r_*$	$144.55^{+0.59}_{-0.60} \quad (+0.4\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 12978.04; \Delta\bar{\chi}_{\text{eff}}^2 = 10489.65; R - 1 = 0.00610$$



## 2.88 base\_CamSpecHM\_TTTEEE\_lowl\_reion\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00027}_{-0.00027} \quad (+0.6\sigma)$	$H_0$	$67.53^{+0.88}_{-0.88} \quad (+0.5\sigma)$	$r_{\text{drag}}$	$147.34^{+0.50}_{-0.49} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1193^{+0.0020}_{-0.0020} \quad (-0.4\sigma)$	$\Omega_\Lambda$	$0.688^{+0.012}_{-0.012} \quad (+0.4\sigma)$	$k_D$	$0.14058^{+0.00060}_{-0.00059} \quad (+0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04081^{+0.00056}_{-0.00055} \quad (+0.1\sigma)$	$\Omega_m$	$0.312^{+0.012}_{-0.012} \quad (-0.4\sigma)$	$100\theta_D$	$0.16082^{+0.00035}_{-0.00035} \quad (-0.7\sigma)$
$\tau$	$0.057^{+0.015}_{-0.014} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1422^{+0.0019}_{-0.0019} \quad (-0.3\sigma)$	$z_{\text{eq}}$	$3384^{+46}_{-45} \quad (-0.3\sigma)$
$\ln(10^{10} A_s)$	$3.045^{+0.034}_{-0.031} \quad (-0.3\sigma)$	$\Omega_m h^3$	$0.09606^{+0.00058}_{-0.00058} \quad (+0.3\sigma)$	$100\theta_{\text{eq}}$	$0.8164^{+0.0086}_{-0.0085} \quad (+0.4\sigma)$
$n_s$	$0.9667^{+0.0076}_{-0.0074} \quad (+0.7\sigma)$	$\sigma_8$	$0.810^{+0.015}_{-0.014} \quad (-0.4\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07155^{+0.00067}_{-0.00066} \quad (+0.4\sigma)$
$y_{\text{cal}}$	$1.0005^{+0.0049}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.014}_{-0.014} \quad (-0.5\sigma)$	$H(0.57)$	$92.98^{+0.41}_{-0.40} \quad (+0.5\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.014}_{-0.014} \quad (-0.5\sigma)$	$D_A(0.57)$	$1389^{+12}_{-12} \quad (-0.5\sigma)$
$A_{143}^{\text{PS}}$	$39^{+10}_{-10} \quad (-0.7\sigma)$	$\sigma_8/h^{0.5}$	$0.985^{+0.021}_{-0.021} \quad (-0.5\sigma)$	$F_{\text{AP}}(0.57)$	$0.6761^{+0.0031}_{-0.0030} \quad (-0.4\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.436^{+0.052}_{-0.048} \quad (-0.7\sigma)$	$f\sigma_8(0.57)$	$0.471^{+0.010}_{-0.010} \quad (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$z_{\text{re}}$	$< 9.32 \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.602^{+0.010}_{-0.0098} \quad (-0.3\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.65 \quad (-1.1\sigma)$	$10^9 A_s$	$2.101^{+0.071}_{-0.065} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24628^{+0.00012}_{-0.00012} \quad (-6.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.20}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.022}_{-0.022} \quad (-0.7\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1225^{+23}_{-23} \quad (-0.9\sigma)$	$f_{2000}^{217}$	$106.6^{+3.6}_{-3.5} \quad (+0.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5716^{+78}_{-74} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{810}$	$2533^{+27}_{-26} \quad (-0.4\sigma)$	$\chi_{\text{lowl}}^2$	$13.22 \quad (\nu: 0.3) \quad (-0.8\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.35}_{-0.35}$	$D_{1420}$	$815.3^{+9.4}_{-9.4} \quad (-0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$12954.0 \quad (\nu: 17.5)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.9667^{+0.0076}_{-0.0074} \quad (+0.7\sigma)$	$\chi_{6\text{DF}}^2$	$0.066 \quad (\nu: 0.0) \quad (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.36}$	$Y_{\text{P}}$	$0.24495^{+0.00012}_{-0.00011} \quad (-6.1\sigma)$	$\chi_{\text{MGS}}^2$	$1.19 \quad (\nu: 0.1) \quad (+0.4\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$\text{Age/Gyr}$	$13.802^{+0.040}_{-0.040} \quad (-0.5\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.86 \quad (\nu: 0.2) \quad (-0.3\sigma)$
$c_{217}$	$0.9972^{+0.0034}_{-0.0035} \quad (+0.7\sigma)$	$z_*$	$1089.90^{+0.45}_{-0.44} \quad (-0.7\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.86 \quad (\nu: 0.1) \quad (-0.4\sigma)$
$c_{TE}$	$1.0057^{+0.0084}_{-0.0086}$	$r_*$	$144.66^{+0.48}_{-0.47} \quad (+0.2\sigma)$	$\chi_{\text{prior}}^2$	$10.5 \quad (\nu: 7.9) \quad (-1.8\sigma)$
$c_{EE}$	$1.0017^{+0.0081}_{-0.0081}$	$100\theta_*$	$1.04101^{+0.00055}_{-0.00054} \quad (+0.1\sigma)$	$\chi_{\text{BAO}}^2$	$4.98 \quad (\nu: 0.4) \quad (-0.3\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$z_{\text{drag}}$	$1059.76^{+0.60}_{-0.59} \quad (+0.5\sigma)$	$\chi_{\text{CMB}}^2$	$12967.2 \quad (\nu: 16.9) \quad (+1593.7\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 12982.71; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.91; R - 1 = 0.01020$$

## 2.89 base\_CamSpecHM\_TTTEEE\_lowl\_reion\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00027}_{-0.00027} \quad (+0.6\sigma)$	$\Omega_\Lambda$	$0.689^{+0.012}_{-0.012} \quad (+0.4\sigma)$	$100\theta_D$	$0.16080^{+0.00034}_{-0.00035} \quad (-0.7\sigma)$
$\Omega_c h^2$	$0.1191^{+0.0020}_{-0.0020} \quad (-0.4\sigma)$	$\Omega_m$	$0.311^{+0.012}_{-0.012} \quad (-0.4\sigma)$	$z_{\text{eq}}$	$3379^{+44}_{-44} \quad (-0.3\sigma)$
$100\theta_{\text{MC}}$	$1.04084^{+0.00055}_{-0.00055} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1421^{+0.0019}_{-0.0019} \quad (-0.3\sigma)$	$100\theta_{\text{eq}}$	$0.8173^{+0.0086}_{-0.0083} \quad (+0.4\sigma)$
$\tau$	$0.057^{+0.015}_{-0.015} \quad (-0.1\sigma)$	$\Omega_m h^3$	$0.09607^{+0.00059}_{-0.00058} \quad (+0.3\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07161^{+0.00065}_{-0.00065} \quad (+0.4\sigma)$
$\ln(10^{10} A_s)$	$3.045^{+0.034}_{-0.031} \quad (-0.3\sigma)$	$\sigma_8$	$0.809^{+0.015}_{-0.014} \quad (-0.4\sigma)$	$H(0.57)$	$93.02^{+0.40}_{-0.39} \quad (+0.5\sigma)$
$n_s$	$0.9672^{+0.0075}_{-0.0073} \quad (+0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.014}_{-0.013} \quad (-0.5\sigma)$	$D_A(0.57)$	$1387^{+12}_{-12} \quad (-0.5\sigma)$
$y_{\text{cal}}$	$1.0005^{+0.0049}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.014}_{-0.014} \quad (-0.5\sigma)$	$F_{\text{AP}}(0.57)$	$0.6758^{+0.0030}_{-0.0029} \quad (-0.4\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.984^{+0.021}_{-0.021} \quad (-0.5\sigma)$	$f\sigma_8(0.57)$	$0.470^{+0.010}_{-0.010} \quad (-0.5\sigma)$
$A_{143}^{\text{PS}}$	$39^{+10}_{-10} \quad (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.433^{+0.052}_{-0.048} \quad (-0.6\sigma)$	$\sigma_8(0.57)$	$0.602^{+0.010}_{-0.0099} \quad (-0.3\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.0\sigma)$	$z_{\text{re}}$	$< 9.35 \quad (-0.1\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24629^{+0.00011}_{-0.00012} \quad (-6.2\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.101^{+0.072}_{-0.066} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.65 \quad (-1.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.022}_{-0.022} \quad (-0.7\sigma)$	$f_{2000}^{217}$	$106.5^{+3.6}_{-3.5} \quad (+0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.21}$	$D_{40}$	$1224^{+23}_{-23} \quad (-0.9\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.5\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5717^{+78}_{-75} \quad (-0.5\sigma)$	$\chi_{\text{lowl}}^2$	$13.13 \quad (\nu: 0.3) \quad (-0.8\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2533^{+27}_{-27} \quad (-0.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$12954.1 \quad (\nu: 17.6)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{1420}$	$815.5^{+9.4}_{-9.4} \quad (-0.1\sigma)$	$\chi_{\text{H070p6}}^2$	$0.82 \quad (\nu: 0.0) \quad (-0.4\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.35}_{-0.35}$	$n_{\text{s},0.002}$	$0.9672^{+0.0075}_{-0.0073} \quad (+0.7\sigma)$	$\chi_{\text{JLA}}^2$	$706.75 \quad (\nu: 0.0) \quad (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.24496^{+0.00012}_{-0.00011} \quad (-6.3\sigma)$	$\chi_{6\text{DF}}^2$	$0.053 \quad (\nu: 0.0) \quad (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.36}$	$\text{Age/Gyr}$	$13.799^{+0.039}_{-0.040} \quad (-0.5\sigma)$	$\chi_{\text{MGS}}^2$	$1.28 \quad (\nu: 0.1) \quad (+0.4\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.86^{+0.44}_{-0.44} \quad (-0.7\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.77 \quad (\nu: 0.1) \quad (-0.3\sigma)$
$c_{217}$	$0.9971^{+0.0034}_{-0.0035} \quad (+0.7\sigma)$	$r_*$	$144.70^{+0.47}_{-0.46} \quad (+0.2\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.76 \quad (\nu: 0.1) \quad (-0.4\sigma)$
$c_{TE}$	$1.0057^{+0.0084}_{-0.0086}$	$100\theta_*$	$1.04103^{+0.00055}_{-0.00054} \quad (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$10.6 \quad (\nu: 8.0) \quad (-1.9\sigma)$
$c_{EE}$	$1.0017^{+0.0081}_{-0.0080}$	$z_{\text{drag}}$	$1059.78^{+0.57}_{-0.57} \quad (+0.5\sigma)$	$\chi_{\text{BAO}}^2$	$4.86 \quad (\nu: 0.3) \quad (-0.2\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$r_{\text{drag}}$	$147.37^{+0.49}_{-0.49} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$12967.3 \quad (\nu: 16.9) \quad (+1589.4\sigma)$
$H_0$	$67.63^{+0.88}_{-0.86} \quad (+0.4\sigma)$	$k_D$	$0.14056^{+0.00060}_{-0.00059} \quad (+0.2\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 13690.27; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.71; R - 1 = 0.01119$$

## 2.90 base\_plikHM\_TE

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02220	$0.02237^{+0.00059}_{-0.00055}$	$\sigma_8$	0.780	$0.834^{+0.10}_{-0.084}$	$r_*$	144.80	$144.91^{+0.98}_{-0.98}$
$\Omega_c h^2$	0.11905	$0.1182^{+0.0044}_{-0.0042}$	$\sigma_8 \Omega_m^{0.5}$	0.435	$0.461^{+0.056}_{-0.049}$	$100\theta_*$	1.04112	$1.04118^{+0.00098}_{-0.0010}$
$100\theta_{MC}$	1.04092	$1.0410^{+0.0010}_{-0.0010}$	$\sigma_8 \Omega_m^{0.25}$	0.582	$0.620^{+0.076}_{-0.063}$	$D_A/\text{Gpc}$	13.909	$13.917^{+0.091}_{-0.091}$
$\tau$	0.026	$< 0.196$	$\sigma_8/h^{0.5}$	0.949	$1.01^{+0.12}_{-0.10}$	$z_{\text{drag}}$	1059.47	$1059.8^{+1.2}_{-1.2}$
$\ln(10^{10} A_s)$	2.975	$3.11^{+0.24}_{-0.20}$	$\langle d^2 \rangle^{1/2}$	2.364	$2.50^{+0.27}_{-0.22}$	$r_{\text{drag}}$	147.53	$147.6^{+1.0}_{-0.99}$
$n_s$	0.9600	$0.971^{+0.029}_{-0.026}$	$z_{\text{re}}$	4.5	$10.4^{+9.2}_{-8.7}$	$k_D$	0.14028	$0.1403^{+0.0011}_{-0.0012}$
$A_{100}^{\text{dustTE}}$	0.139	$0.136^{+0.074}_{-0.073}$	$10^9 A_s$	1.96	$2.25^{+0.58}_{-0.44}$	$100\theta_D$	0.16102	$0.16084^{+0.00070}_{-0.00069}$
$A_{100 \times 143}^{\text{dustTE}}$	0.134	$0.133^{+0.057}_{-0.058}$	$10^9 A_s e^{-2\tau}$	1.8609	$1.870^{+0.043}_{-0.040}$	$z_{\text{eq}}$	3375	$3359^{+99}_{-95}$
$A_{100 \times 217}^{\text{dustTE}}$	0.304	$0.30^{+0.17}_{-0.17}$	$D_{40}$	1225	$1236^{+67}_{-65}$	$k_{\text{eq}}$	0.010302	$0.01025^{+0.00030}_{-0.00029}$
$A_{143}^{\text{dustTE}}$	0.153	$0.15^{+0.11}_{-0.11}$	$D_{220}$	5701	$5713^{+120}_{-110}$	$100\theta_{\text{eq}}$	0.8176	$0.821^{+0.019}_{-0.019}$
$A_{143 \times 217}^{\text{dustTE}}$	0.334	$0.34^{+0.16}_{-0.16}$	$D_{810}$	2511	$2529^{+61}_{-58}$	$100\theta_{s,\text{eq}}$	0.4518	$0.4536^{+0.0095}_{-0.0095}$
$A_{217}^{\text{dustTE}}$	1.65	$1.66^{+0.50}_{-0.51}$	$D_{1420}$	805.2	$815^{+29}_{-28}$	$r_{\text{drag}}/D_V(0.57)$	0.07162	$0.0719^{+0.0015}_{-0.0015}$
$c_{100}$	0.99924	$0.9992^{+0.0020}_{-0.0019}$	$D_{2000}$	226.1	$231^{+12}_{-12}$	$H(0.57)$	92.94	$93.18^{+0.94}_{-0.86}$
$y_{\text{cal}}$	1.00000	$1.0000^{+0.0050}_{-0.0049}$	$n_{s,0.002}$	0.9600	$0.971^{+0.029}_{-0.026}$	$D_A(0.57)$	1388.7	$1382^{+26}_{-27}$
$H_0$	67.55	$68.0^{+2.0}_{-1.9}$	$Y_P$	0.245319	$0.24539^{+0.00026}_{-0.00025}$	$F_{\text{AP}}(0.57)$	0.6759	$0.6745^{+0.0068}_{-0.0065}$
$\Omega_\Lambda$	0.6890	$0.695^{+0.025}_{-0.027}$	$Y_P^{\text{BBN}}$	0.246645	$0.24672^{+0.00026}_{-0.00025}$	$f\sigma_8(0.57)$	0.453	$0.483^{+0.060}_{-0.049}$
$\Omega_m$	0.3110	$0.305^{+0.027}_{-0.025}$	$10^5 D/H$	2.623	$2.59^{+0.11}_{-0.11}$	$\sigma_8(0.57)$	0.580	$0.622^{+0.080}_{-0.063}$
$\Omega_m h^2$	0.14190	$0.1412^{+0.0041}_{-0.0040}$	Age/Gyr	13.810	$13.787^{+0.084}_{-0.087}$	$\chi^2_{\text{plikTE}}$	931.2	$938.9 (\nu: 8.6)$
$\Omega_m h^3$	0.09585	$0.0960^{+0.0011}_{-0.0011}$	$z_*$	1090.05	$1089.77^{+0.95}_{-0.96}$	$\chi^2_{\text{prior}}$	1.9	$7.9 (\nu: 6.7)$

Best-fit  $\chi^2_{\text{eff}} = 933.10$ ;  $\bar{\chi}^2_{\text{eff}} = 946.77$ ;  $R - 1 = 0.00574$   
 $\chi^2_{\text{eff}}$ : CMB - plik\_dx11dr2\_HM\_v18\_TE: 931.21

## 2.91 base\_plikHM\_TE\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022249	$0.02234^{+0.00050}_{-0.00049}$	$\sigma_8 \Omega_m^{0.25}$	0.589	$0.618^{+0.074}_{-0.060}$	$r_{\text{drag}}$	147.55	$147.53^{+0.76}_{-0.75}$
$\Omega_c h^2$	0.11880	$0.1185^{+0.0025}_{-0.0025}$	$\sigma_8/h^{0.5}$	0.961	$1.01^{+0.12}_{-0.096}$	$k_D$	0.14030	$0.1404^{+0.0011}_{-0.0010}$
$100\theta_{\text{MC}}$	1.04097	$1.04097^{+0.00091}_{-0.00092}$	$\langle d^2 \rangle^{1/2}$	2.389	$2.49^{+0.26}_{-0.21}$	$100\theta_D$	0.16097	$0.16086^{+0.00067}_{-0.00066}$
$\tau$	0.039	$< 0.182$	$z_{\text{re}}$	6.1	$10.0^{+8.8}_{-8.3}$	$z_{\text{eq}}$	3371	$3365^{+60}_{-58}$
$\ln(10^{10} A_s)$	3.003	$3.10^{+0.23}_{-0.18}$	$10^9 A_s$	2.014	$2.23^{+0.54}_{-0.41}$	$k_{\text{eq}}$	0.010288	$0.01027^{+0.00018}_{-0.00018}$
$n_s$	0.9622	$0.969^{+0.025}_{-0.023}$	$10^9 A_s e^{-2\tau}$	1.8622	$1.871^{+0.041}_{-0.039}$	$100\theta_{\text{eq}}$	0.8187	$0.820^{+0.011}_{-0.011}$
$A_{100}^{\text{dustTE}}$	0.137	$0.138^{+0.073}_{-0.073}$	$D_{40}$	1224	$1235^{+64}_{-61}$	$100\theta_{s,\text{eq}}$	0.4523	$0.4529^{+0.0056}_{-0.0056}$
$A_{100 \times 143}^{\text{dustTE}}$	0.135	$0.133^{+0.057}_{-0.057}$	$D_{220}$	5704	$5710^{+120}_{-120}$	$r_{\text{drag}}/D_V(0.57)$	0.07172	$0.07184^{+0.00085}_{-0.00082}$
$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.17}_{-0.16}$	$D_{810}$	2514	$2528^{+59}_{-57}$	$H(0.57)$	93.01	$93.12^{+0.60}_{-0.58}$
$A_{143}^{\text{dustTE}}$	0.156	$0.15^{+0.10}_{-0.11}$	$D_{1420}$	807.1	$814^{+27}_{-26}$	$D_A(0.57)$	1386.7	$1384^{+16}_{-16}$
$A_{143 \times 217}^{\text{dustTE}}$	0.333	$0.34^{+0.16}_{-0.16}$	$D_{2000}$	227.0	$230^{+12}_{-11}$	$F_{\text{AP}}(0.57)$	0.67545	$0.6749^{+0.0038}_{-0.0038}$
$A_{217}^{\text{dustTE}}$	1.65	$1.66^{+0.51}_{-0.51}$	$n_{s,0.002}$	0.9622	$0.969^{+0.025}_{-0.023}$	$f\sigma_8(0.57)$	0.459	$0.482^{+0.058}_{-0.046}$
$c_{100}$	0.99924	$0.9992^{+0.0020}_{-0.0019}$	$Y_P$	0.245340	$0.24538^{+0.00022}_{-0.00022}$	$\sigma_8(0.57)$	0.588	$0.619^{+0.075}_{-0.059}$
$y_{\text{cal}}$	1.00002	$0.99999^{+0.0050}_{-0.0049}$	$Y_P^{\text{BBN}}$	0.246666	$0.24670^{+0.00022}_{-0.00022}$	$\chi_{\text{plikTE}}^2$	931.3	$938.3 (\nu: 7.7)$
$H_0$	67.69	$67.9^{+1.2}_{-1.1}$	$10^5 D/H$	2.614	$2.598^{+0.093}_{-0.092}$	$\chi_{6\text{DF}}^2$	0.015	$0.045 (\nu: 0.0)$
$\Omega_\Lambda$	0.6908	$0.693^{+0.015}_{-0.015}$	Age/Gyr	13.803	$13.792^{+0.064}_{-0.065}$	$\chi_{\text{MGS}}^2$	1.34	$1.58 (\nu: 0.2)$
$\Omega_m$	0.3092	$0.307^{+0.015}_{-0.015}$	$z_*$	1089.97	$1089.83^{+0.71}_{-0.70}$	$\chi_{\text{DR11CMass}}^2$	2.42	$2.86 (\nu: 0.2)$
$\Omega_m h^2$	0.14170	$0.1415^{+0.0025}_{-0.0024}$	$r_*$	144.83	$144.85^{+0.67}_{-0.66}$	$\chi_{\text{DR11LOWZ}}^2$	0.54	$0.54 (\nu: 0.1)$
$\Omega_m h^3$	0.09592	$0.0960^{+0.0011}_{-0.0011}$	$100\theta_*$	1.04117	$1.04116^{+0.00090}_{-0.00092}$	$\chi_{\text{prior}}^2$	1.8	$7.9 (\nu: 6.7)$
$\sigma_8$	0.790	$0.830^{+0.10}_{-0.079}$	$D_A/\text{Gpc}$	13.911	$13.913^{+0.066}_{-0.064}$	$\chi_{\text{BAO}}^2$	4.32	$5.02 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.5}$	0.439	$0.460^{+0.055}_{-0.046}$	$z_{\text{drag}}$	1059.55	$1059.8^{+1.1}_{-1.1}$			

Best-fit  $\chi_{\text{eff}}^2 = 937.43$ ;  $\bar{\chi}_{\text{eff}}^2 = 951.18$ ;  $R - 1 = 0.00975$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.34 DR11CMass: 2.42 DR11LOWZ: 0.54 CMB - plik\_dx11dr2\_HM\_v18\_TE: 931.30

## 2.92 base\_plikHM\_TE\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022280	$0.02237^{+0.00050}_{-0.00048}$	$\sigma_8/h^{0.5}$	0.965	$1.01^{+0.12}_{-0.099}$	$100\theta_D$	0.16094	$0.16084^{+0.00067}_{-0.00065}$
$\Omega_c h^2$	0.11834	$0.1182^{+0.0024}_{-0.0024}$	$\langle d^2 \rangle^{1/2}$	2.399	$2.49^{+0.26}_{-0.22}$	$z_{\text{eq}}$	3360	$3360^{+57}_{-57}$
$100\theta_{\text{MC}}$	1.04098	$1.04101^{+0.00090}_{-0.00092}$	$z_{\text{re}}$	6.9	$10.3^{+8.8}_{-8.4}$	$k_{\text{eq}}$	0.010256	$0.01025^{+0.00017}_{-0.00017}$
$\tau$	0.047	$< 0.188$	$10^9 A_s$	2.044	$2.24^{+0.55}_{-0.42}$	$100\theta_{\text{eq}}$	0.8206	$0.821^{+0.011}_{-0.010}$
$\ln(10^{10} A_s)$	3.018	$3.10^{+0.23}_{-0.19}$	$10^9 A_s e^{-2\tau}$	1.8606	$1.870^{+0.041}_{-0.040}$	$100\theta_{s,\text{eq}}$	0.4533	$0.4534^{+0.0055}_{-0.0054}$
$n_s$	0.9638	$0.970^{+0.025}_{-0.023}$	$D_{40}$	1222	$1235^{+66}_{-62}$	$r_{\text{drag}}/D_V(0.57)$	0.07186	$0.07192^{+0.00082}_{-0.00080}$
$A_{100}^{\text{dustTE}}$	0.137	$0.138^{+0.073}_{-0.073}$	$D_{220}$	5704	$5712^{+120}_{-120}$	$H(0.57)$	93.08	$93.17^{+0.59}_{-0.57}$
$A_{100 \times 143}^{\text{dustTE}}$	0.134	$0.133^{+0.057}_{-0.057}$	$D_{810}$	2514	$2529^{+59}_{-58}$	$D_A(0.57)$	1384.2	$1382^{+15}_{-15}$
$A_{100 \times 217}^{\text{dustTE}}$	0.304	$0.30^{+0.17}_{-0.16}$	$D_{1420}$	807.5	$815^{+28}_{-27}$	$F_{\text{AP}}(0.57)$	0.67477	$0.6745^{+0.0037}_{-0.0036}$
$A_{143}^{\text{dustTE}}$	0.155	$0.15^{+0.10}_{-0.11}$	$D_{2000}$	227.3	$231^{+12}_{-11}$	$f\sigma_8(0.57)$	0.461	$0.482^{+0.059}_{-0.048}$
$A_{143 \times 217}^{\text{dustTE}}$	0.332	$0.34^{+0.16}_{-0.16}$	$n_{s,0.002}$	0.9638	$0.970^{+0.025}_{-0.023}$	$\sigma_8(0.57)$	0.593	$0.621^{+0.077}_{-0.061}$
$A_{217}^{\text{dustTE}}$	1.65	$1.66^{+0.51}_{-0.51}$	$Y_{\text{P}}$	0.245353	$0.24539^{+0.00022}_{-0.00022}$	$\chi^2_{\text{plikTE}}$	931.3	$938.3 (\nu: 7.7)$
$c_{100}$	0.99927	$0.9992^{+0.0020}_{-0.0019}$	$Y_{\text{P}}^{\text{BBN}}$	0.246680	$0.24672^{+0.00022}_{-0.00022}$	$\chi^2_{\text{H070p6}}$	0.67	$0.64 (\nu: 0.0)$
$y_{\text{cal}}$	0.99987	$1.0000^{+0.0050}_{-0.0049}$	$10^5 \text{D}/\text{H}$	2.608	$2.592^{+0.093}_{-0.092}$	$\chi^2_{\text{JLA}}$	706.625	$706.65 (\nu: 0.0)$
$H_0$	67.88	$68.0^{+1.1}_{-1.1}$	$\text{Age}/\text{Gyr}$	13.798	$13.787^{+0.063}_{-0.066}$	$\chi^2_{6\text{DF}}$	0.003	$0.039 (\nu: 0.0)$
$\Omega_\Lambda$	0.6934	$0.695^{+0.014}_{-0.014}$	$z_*$	1089.89	$1089.77^{+0.70}_{-0.69}$	$\chi^2_{\text{MGS}}$	1.54	$1.69 (\nu: 0.2)$
$\Omega_m$	0.3066	$0.305^{+0.014}_{-0.014}$	$r_*$	144.93	$144.89^{+0.67}_{-0.65}$	$\chi^2_{\text{DR11CMass}}$	2.41	$2.87 (\nu: 0.2)$
$\Omega_m h^2$	0.14127	$0.1412^{+0.0024}_{-0.0024}$	$100\theta_*$	1.04117	$1.04119^{+0.00089}_{-0.00092}$	$\chi^2_{\text{DR11LOWZ}}$	0.37	$0.44 (\nu: 0.1)$
$\Omega_m h^3$	0.09590	$0.0961^{+0.0011}_{-0.0011}$	$D_A/\text{Gpc}$	13.920	$13.916^{+0.065}_{-0.065}$	$\chi^2_{\text{prior}}$	1.8	$7.9 (\nu: 6.7)$
$\sigma_8$	0.795	$0.832^{+0.10}_{-0.082}$	$z_{\text{drag}}$	1059.59	$1059.8^{+1.1}_{-1.1}$	$\chi^2_{\text{BAO}}$	4.33	$5.04 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.5}$	0.440	$0.460^{+0.056}_{-0.047}$	$r_{\text{drag}}$	147.63	$147.57^{+0.76}_{-0.73}$			
$\sigma_8 \Omega_m^{0.25}$	0.592	$0.619^{+0.076}_{-0.061}$	$k_D$	0.14023	$0.1404^{+0.0010}_{-0.0010}$			

Best-fit  $\chi^2_{\text{eff}} = 1644.79$ ;  $\bar{\chi}^2_{\text{eff}} = 1658.51$ ;  $R - 1 = 0.01010$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.54 DR11CMass: 2.42 DR11LOWZ: 0.37 CMB - plik\_dx11dr2\_HM\_v18\_TE: 931.33 Hubble - H070p6: 0.67 SN - JLA December\_2013: 706.62

### 2.93 base\_plikHM\_EE

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02443	$0.0244^{+0.0026}_{-0.0025}$	$\sigma_8 \Omega_m^{0.5}$	0.487	$0.472^{+0.079}_{-0.080}$	$100\theta_*$	1.03987	$1.0398^{+0.0018}_{-0.0018}$
$\Omega_c h^2$	0.1126	$0.1132^{+0.0098}_{-0.0091}$	$\sigma_8 \Omega_m^{0.25}$	0.676	$0.652^{+0.088}_{-0.095}$	$D_A/\text{Gpc}$	13.923	$13.91^{+0.13}_{-0.13}$
$100\theta_{\text{MC}}$	1.03989	$1.0399^{+0.0018}_{-0.0019}$	$\sigma_8/h^{0.5}$	1.110	$1.07^{+0.14}_{-0.15}$	$z_{\text{drag}}$	1064.0	$1064.1^{+5.1}_{-5.0}$
$\tau$	0.232	$0.19^{+0.11}_{-0.14}$	$\langle d^2 \rangle^{1/2}$	2.802	$2.70^{+0.31}_{-0.36}$	$r_{\text{drag}}$	146.81	$146.6^{+1.5}_{-1.5}$
$\ln(10^{10} A_s)$	3.414	$3.33^{+0.23}_{-0.28}$	$z_{\text{re}}$	19.9	$17.0^{+6.9}_{-9.4}$	$k_D$	0.14254	$0.1427^{+0.0026}_{-0.0027}$
$n_s$	0.9812	$0.980^{+0.033}_{-0.032}$	$10^9 A_s$	3.04	$2.82^{+0.63}_{-0.74}$	$100\theta_D$	0.15829	$0.1583^{+0.0026}_{-0.0025}$
$A_{100}^{\text{dustEE}}$	0.0775	$0.078^{+0.013}_{-0.013}$	$10^9 A_s e^{-2\tau}$	1.909	$1.912^{+0.052}_{-0.051}$	$z_{\text{eq}}$	3274	$3289^{+190}_{-170}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0442	$0.045^{+0.013}_{-0.013}$	$D_{40}$	1385	$1351^{+140}_{-140}$	$k_{\text{eq}}$	0.00999	$0.01004^{+0.00057}_{-0.00051}$
$A_{100 \times 217}^{\text{dustEE}}$	0.097	$0.099^{+0.064}_{-0.065}$	$D_{220}$	6112	$6112^{+420}_{-410}$	$100\theta_{\text{eq}}$	0.8420	$0.840^{+0.040}_{-0.040}$
$A_{143}^{\text{dustEE}}$	0.0958	$0.096^{+0.015}_{-0.016}$	$D_{810}$	2591	$2595^{+78}_{-80}$	$100\theta_{s,\text{eq}}$	0.4627	$0.461^{+0.019}_{-0.019}$
$A_{143 \times 217}^{\text{dustEE}}$	0.218	$0.223^{+0.092}_{-0.093}$	$D_{1420}$	840.8	$842^{+37}_{-38}$	$r_{\text{drag}}/D_V(0.57)$	0.07375	$0.0736^{+0.0037}_{-0.0036}$
$A_{217}^{\text{dustEE}}$	0.634	$0.64^{+0.26}_{-0.26}$	$D_{2000}$	244.5	$244^{+15}_{-15}$	$H(0.57)$	95.15	$95.2^{+3.5}_{-3.3}$
$y_{\text{cal}}$	0.99983	$1.0001^{+0.0049}_{-0.0048}$	$n_{s,0.002}$	0.9812	$0.980^{+0.033}_{-0.032}$	$D_A(0.57)$	1335	$1337^{+78}_{-76}$
$H_0$	71.4	$71.3^{+5.8}_{-5.7}$	$Y_P$	0.24625	$0.24624^{+0.00099}_{-0.0010}$	$F_{\text{AP}}(0.57)$	0.6651	$0.666^{+0.016}_{-0.016}$
$\Omega_\Lambda$	0.730	$0.726^{+0.058}_{-0.061}$	$Y_P^{\text{BBN}}$	0.24758	$0.2476^{+0.0010}_{-0.0010}$	$f\sigma_8(0.57)$	0.531	$0.512^{+0.065}_{-0.072}$
$\Omega_m$	0.270	$0.274^{+0.061}_{-0.058}$	$10^5 \text{D}/\text{H}$	2.250	$2.26^{+0.40}_{-0.38}$	$\sigma_8(0.57)$	0.710	$0.682^{+0.074}_{-0.090}$
$\Omega_m h^2$	0.1377	$0.1383^{+0.0078}_{-0.0070}$	Age/Gyr	13.587	$13.59^{+0.31}_{-0.32}$	$\chi_{\text{plikEE}}^2$	747.6	756.3 ( $\nu$ : 9.9)
$\Omega_m h^3$	0.09832	$0.0984^{+0.0039}_{-0.0038}$	$z_*$	1086.93	$1087.0^{+3.5}_{-3.4}$	$\chi_{\text{prior}}^2$	3.0	7.4 ( $\nu$ : 5.9)
$\sigma_8$	0.938	$0.90^{+0.10}_{-0.12}$	$r_*$	144.78	$144.6^{+1.4}_{-1.4}$			

Best-fit  $\chi_{\text{eff}}^2 = 750.57$ ;  $\bar{\chi}_{\text{eff}}^2 = 763.68$ ;  $R - 1 = 0.00703$   
 $\chi_{\text{eff}}^2$ : CMB - plik\_dx11dr2\_HM.v18\_EE: 747.57

## 2.94 base\_plikHM\_EE\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02333	$0.0234^{+0.0013}_{-0.0013}$	$\sigma_8/h^{0.5}$	1.138	$1.09^{+0.12}_{-0.14}$	$k_D$	0.14201	$0.1420^{+0.0023}_{-0.0024}$
$\Omega_c h^2$	0.11757	$0.1176^{+0.0030}_{-0.0030}$	$\langle d^2 \rangle^{1/2}$	2.846	$2.74^{+0.30}_{-0.34}$	$100\theta_D$	0.15934	$0.1593^{+0.0018}_{-0.0016}$
$100\theta_{MC}$	1.03944	$1.0395^{+0.0017}_{-0.0017}$	$z_{re}$	19.4	$16.5^{+7.5}_{-9.5}$	$z_{eq}$	3367	$3368^{+71}_{-71}$
$\tau$	0.212	$0.17^{+0.11}_{-0.13}$	$10^9 A_s$	2.92	$2.72^{+0.57}_{-0.66}$	$k_{eq}$	0.010277	$0.01028^{+0.00022}_{-0.00022}$
$\ln(10^{10} A_s)$	3.375	$3.29^{+0.22}_{-0.26}$	$10^9 A_s e^{-2\tau}$	1.912	$1.911^{+0.055}_{-0.051}$	$100\theta_{eq}$	0.8212	$0.821^{+0.013}_{-0.012}$
$n_s$	0.9685	$0.968^{+0.022}_{-0.021}$	$D_{40}$	1373	$1343^{+130}_{-130}$	$100\theta_{s,eq}$	0.4527	$0.4527^{+0.0066}_{-0.0064}$
$A_{100}^{dustEE}$	0.0768	$0.078^{+0.013}_{-0.013}$	$D_{220}$	5966	$5965^{+280}_{-290}$	$r_{drag}/D_V(0.57)$	0.07188	$0.0719^{+0.0010}_{-0.00096}$
$A_{100 \times 143}^{dustEE}$	0.0437	$0.045^{+0.011}_{-0.012}$	$D_{810}$	2572	$2574^{+68}_{-68}$	$H(0.57)$	93.59	$93.6^{+1.2}_{-1.1}$
$A_{100 \times 217}^{dustEE}$	0.097	$0.097^{+0.065}_{-0.063}$	$D_{1420}$	828.4	$830^{+30}_{-30}$	$D_A(0.57)$	1374.1	$1374^{+24}_{-25}$
$A_{143}^{dustEE}$	0.0950	$0.095^{+0.015}_{-0.015}$	$D_{2000}$	239.2	$239^{+12}_{-11}$	$F_{AP}(0.57)$	0.67347	$0.6735^{+0.0046}_{-0.0048}$
$A_{143 \times 217}^{dustEE}$	0.220	$0.220^{+0.088}_{-0.090}$	$n_{s,0.002}$	0.9685	$0.968^{+0.022}_{-0.021}$	$f\sigma_8(0.57)$	0.545	$0.524^{+0.058}_{-0.066}$
$A_{217}^{dustEE}$	0.638	$0.64^{+0.25}_{-0.27}$	$Y_P$	0.24581	$0.24581^{+0.00054}_{-0.00057}$	$\sigma_8(0.57)$	0.704	$0.677^{+0.075}_{-0.085}$
$y_{cal}$	1.00005	$1.0000^{+0.0050}_{-0.0048}$	$Y_P^{BBN}$	0.24713	$0.24714^{+0.00054}_{-0.00058}$	$\chi^2_{plikEE}$	748.8	$756.3 (\nu: 9.0)$
$H_0$	68.52	$68.5^{+1.8}_{-1.7}$	$10^5 D/H$	2.421	$2.42^{+0.23}_{-0.21}$	$\chi^2_{6DF}$	0.000	$0.058 (\nu: 0.0)$
$\Omega_\Lambda$	0.6985	$0.698^{+0.018}_{-0.018}$	Age/Gyr	13.734	$13.73^{+0.13}_{-0.14}$	$\chi^2_{MGS}$	1.68	$1.78 (\nu: 0.3)$
$\Omega_m$	0.3015	$0.302^{+0.018}_{-0.018}$	$z_*$	1088.55	$1088.5^{+1.7}_{-1.5}$	$\chi^2_{DR11CMass}$	2.56	$3.17 (\nu: 0.4)$
$\Omega_m h^2$	0.14154	$0.1416^{+0.0030}_{-0.0029}$	$r_*$	144.32	$144.3^{+1.1}_{-1.1}$	$\chi^2_{DR11LOWZ}$	0.30	$0.48 (\nu: 0.1)$
$\Omega_m h^3$	0.09698	$0.0971^{+0.0026}_{-0.0023}$	$100\theta_*$	1.03953	$1.0395^{+0.0017}_{-0.0017}$	$\chi^2_{prior}$	2.9	$7.3 (\nu: 5.8)$
$\sigma_8$	0.942	$0.91^{+0.10}_{-0.11}$	$D_A/Gpc$	13.884	$13.88^{+0.11}_{-0.11}$	$\chi^2_{BAO}$	4.54	$5.5 (\nu: 1.0)$
$\sigma_8 \Omega_m^{0.5}$	0.517	$0.497^{+0.055}_{-0.063}$	$z_{drag}$	1061.95	$1062.0^{+2.8}_{-3.0}$			
$\sigma_8 \Omega_m^{0.25}$	0.698	$0.671^{+0.075}_{-0.085}$	$r_{drag}$	146.67	$146.6^{+1.4}_{-1.5}$			

Best-fit  $\chi^2_{eff} = 756.21$ ;  $\bar{\chi}^2_{eff} = 769.06$ ;  $R - 1 = 0.01745$

$\chi^2_{eff}$ : BAO - 6DF: 0.00 MGS: 1.68 DR11CMass: 2.56 DR11LOWZ: 0.30 CMB - plik\_dx11dr2\_HM\_v18\_EE: 748.81

## 2.95 base\_plikHM\_EE\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02349	$0.0235^{+0.0013}_{-0.0013}$	$\sigma_8/h^{0.5}$	1.134	$1.09^{+0.12}_{-0.14}$	$k_D$	0.14222	$0.1422^{+0.0023}_{-0.0024}$
$\Omega_c h^2$	0.11730	$0.1174^{+0.0029}_{-0.0029}$	$\langle d^2 \rangle^{1/2}$	2.841	$2.74^{+0.30}_{-0.34}$	$100\theta_D$	0.15915	$0.1592^{+0.0017}_{-0.0017}$
$100\theta_{MC}$	1.03938	$1.0395^{+0.0017}_{-0.0017}$	$z_{re}$	19.3	$16.5^{+7.5}_{-9.4}$	$z_{eq}$	3364	$3365^{+69}_{-69}$
$\tau$	0.212	$0.17^{+0.11}_{-0.13}$	$10^9 A_s$	2.92	$2.72^{+0.60}_{-0.67}$	$k_{eq}$	0.010268	$0.01027^{+0.00021}_{-0.00021}$
$\ln(10^{10} A_s)$	3.375	$3.30^{+0.22}_{-0.26}$	$10^9 A_s e^{-2\tau}$	1.914	$1.913^{+0.055}_{-0.052}$	$100\theta_{eq}$	0.8220	$0.822^{+0.012}_{-0.012}$
$n_s$	0.9686	$0.968^{+0.022}_{-0.021}$	$D_{40}$	1376	$1345^{+130}_{-130}$	$100\theta_{s,eq}$	0.4531	$0.4530^{+0.0064}_{-0.0061}$
$A_{100}^{dustEE}$	0.0771	$0.077^{+0.013}_{-0.013}$	$D_{220}$	5992	$5981^{+270}_{-290}$	$r_{drag}/D_V(0.57)$	0.07197	$0.07197^{+0.00096}_{-0.00090}$
$A_{100 \times 143}^{dustEE}$	0.0438	$0.044^{+0.011}_{-0.012}$	$D_{810}$	2576	$2577^{+66}_{-68}$	$H(0.57)$	93.72	$93.7^{+1.1}_{-1.1}$
$A_{100 \times 217}^{dustEE}$	0.098	$0.097^{+0.065}_{-0.064}$	$D_{1420}$	830.0	$831^{+29}_{-29}$	$D_A(0.57)$	1371.1	$1371^{+24}_{-24}$
$A_{143}^{dustEE}$	0.0948	$0.095^{+0.015}_{-0.015}$	$D_{2000}$	239.9	$239^{+11}_{-11}$	$F_{AP}(0.57)$	0.67295	$0.6730^{+0.0045}_{-0.0045}$
$A_{143 \times 217}^{dustEE}$	0.221	$0.220^{+0.088}_{-0.090}$	$n_{s,0.002}$	0.9686	$0.968^{+0.022}_{-0.021}$	$f\sigma_8(0.57)$	0.543	$0.523^{+0.058}_{-0.066}$
$A_{217}^{dustEE}$	0.640	$0.64^{+0.24}_{-0.26}$	$Y_P$	0.24587	$0.24585^{+0.00051}_{-0.00055}$	$\sigma_8(0.57)$	0.703	$0.677^{+0.075}_{-0.086}$
$y_{cal}$	0.99990	$1.0000^{+0.0050}_{-0.0048}$	$Y_P^{BBN}$	0.24720	$0.24718^{+0.00051}_{-0.00056}$	$\chi^2_{plikEE}$	748.7	756.2 ( $\nu$ : 8.9)
$H_0$	68.72	$68.7^{+1.7}_{-1.6}$	$10^5 D/H$	2.395	$2.40^{+0.23}_{-0.21}$	$\chi^2_{H070p6}$	0.323	0.39 ( $\nu$ : 0.0)
$\Omega_\Lambda$	0.7005	$0.700^{+0.017}_{-0.017}$	Age/Gyr	13.719	$13.72^{+0.13}_{-0.13}$	$\chi^2_{JLA}$	706.517	706.59 ( $\nu$ : 0.0)
$\Omega_m$	0.2995	$0.300^{+0.017}_{-0.017}$	$z_*$	1088.35	$1088.4^{+1.7}_{-1.5}$	$\chi^2_{6DF}$	0.002	0.054 ( $\nu$ : 0.0)
$\Omega_m h^2$	0.14143	$0.1415^{+0.0029}_{-0.0029}$	$r_*$	144.28	$144.3^{+1.1}_{-1.1}$	$\chi^2_{MGS}$	1.82	1.90 ( $\nu$ : 0.2)
$\Omega_m h^3$	0.09720	$0.0972^{+0.0025}_{-0.0023}$	$100\theta_*$	1.03946	$1.0395^{+0.0017}_{-0.0017}$	$\chi^2_{DR11CMAS}$	2.63	3.18 ( $\nu$ : 0.4)
$\sigma_8$	0.940	$0.91^{+0.10}_{-0.11}$	$D_A/\text{Gpc}$	13.880	$13.88^{+0.11}_{-0.11}$	$\chi^2_{DR11LOWZ}$	0.22	0.39 ( $\nu$ : 0.1)
$\sigma_8 \Omega_m^{0.5}$	0.514	$0.496^{+0.054}_{-0.063}$	$z_{drag}$	1062.30	$1062.2^{+2.8}_{-2.9}$	$\chi^2_{prior}$	2.9	7.3 ( $\nu$ : 5.7)
$\sigma_8 \Omega_m^{0.25}$	0.695	$0.671^{+0.075}_{-0.085}$	$r_{drag}$	146.57	$146.6^{+1.4}_{-1.4}$	$\chi^2_{BAO}$	4.67	5.5 ( $\nu$ : 1.0)

Best-fit  $\chi^2_{eff} = 1463.07$ ;  $\bar{\chi}^2_{eff} = 1475.93$ ;  $R - 1 = 0.01752$

$\chi^2_{eff}$ : BAO - 6DF: 0.00 MGS: 1.82 DR11CMAS: 2.63 DR11LOWZ: 0.22 CMB - plik\_dx11dr2\_HM.v18\_EE: 748.67 Hubble - H070p6: 0.32 SN - JLA December\_2013: 706.52



## 2.96 base\_CamSpecHM\_TE

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02234	$0.02247^{+0.00064}_{-0.00061}$ (+0.4 $\sigma$ )	$\sigma_8/h^{0.5}$	0.971	$1.01^{+0.14}_{-0.11}$ (+0.0 $\sigma$ )	$r_{\text{drag}}$	148.00	$148.03^{+0.98}_{-1.0}$ (+0.9 $\sigma$ )
$\Omega_c h^2$	0.11672	$0.1161^{+0.0045}_{-0.0044}$ (-1.0 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.389	$2.47^{+0.29}_{-0.24}$ (-0.2 $\sigma$ )	$k_D$	0.13991	$0.1400^{+0.0012}_{-0.0011}$ (-0.7 $\sigma$ )
$100\theta_{\text{MC}}$	1.04125	$1.0413^{+0.0010}_{-0.00097}$ (+0.7 $\sigma$ )	$z_{\text{re}}$	8.5	$11.5^{+9.5}_{-9.0}$ (+0.2 $\sigma$ )	$100\theta_D$	0.16094	$0.16080^{+0.00072}_{-0.00073}$ (-0.1 $\sigma$ )
$\tau$	0.063	< 0.227 (+0.3 $\sigma$ )	$10^9 A_s$	2.10	$2.31^{+0.65}_{-0.50}$ (+0.2 $\sigma$ )	$z_{\text{eq}}$	3323	$3311^{+100}_{-97}$ (-1.0 $\sigma$ )
$\ln(10^{10} A_s)$	3.044	$3.13^{+0.27}_{-0.22}$ (+0.2 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.850	$1.855^{+0.055}_{-0.054}$ (-0.7 $\sigma$ )	$100\theta_{\text{eq}}$	0.8279	$0.831^{+0.020}_{-0.019}$ (+1.0 $\sigma$ )
$n_s$	0.9763	$0.984^{+0.032}_{-0.030}$ (+0.9 $\sigma$ )	$D_{40}$	1193	$1210^{+79}_{-72}$ (-0.8 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07245	$0.0727^{+0.0016}_{-0.0015}$ (+1.0 $\sigma$ )
$y_{\text{cal}}$	0.99992	$0.9999^{+0.0049}_{-0.0048}$ (-0.0 $\sigma$ )	$D_{220}$	5650	$5658^{+160}_{-160}$ (-0.9 $\sigma$ )	$H(0.57)$	93.38	$93.6^{+1.0}_{-0.99}$ (+0.9 $\sigma$ )
$c_{TE}$	0.99995	$0.9996^{+0.019}_{-0.020}$	$D_{810}$	2514	$2525^{+79}_{-76}$ (-0.1 $\sigma$ )	$D_A(0.57)$	1374.7	$1370^{+27}_{-28}$ (-0.9 $\sigma$ )
$H_0$	68.62	$69.0^{+2.1}_{-2.0}$ (+1.0 $\sigma$ )	$D_{1420}$	812.2	$818^{+35}_{-32}$ (+0.3 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6722	$0.6712^{+0.0069}_{-0.0067}$ (-1.0 $\sigma$ )
$\Omega_\Lambda$	0.7033	$0.707^{+0.025}_{-0.027}$ (+1.0 $\sigma$ )	$n_{s,0.002}$	0.9763	$0.984^{+0.032}_{-0.030}$ (+0.9 $\sigma$ )	$f\sigma_8(0.57)$	0.464	$0.483^{+0.066}_{-0.052}$ (-0.0 $\sigma$ )
$\Omega_m$	0.2967	$0.293^{+0.027}_{-0.025}$ (-1.0 $\sigma$ )	$Y_P$	0.244960	$0.24502^{+0.00027}_{-0.00024}$ (-2.8 $\sigma$ )	$\sigma_8(0.57)$	0.602	$0.630^{+0.090}_{-0.071}$ (+0.2 $\sigma$ )
$\Omega_m h^2$	0.13971	$0.1392^{+0.0042}_{-0.0041}$ (-1.0 $\sigma$ )	Age/Gyr	13.775	$13.757^{+0.086}_{-0.094}$ (-0.7 $\sigma$ )	$Y_P^{\text{BBN}}$	0.246291	$0.24634^{+0.00027}_{-0.00025}$ (-2.8 $\sigma$ )
$\Omega_m h^3$	0.09586	$0.0960^{+0.0011}_{-0.0011}$ (-0.0 $\sigma$ )	$z_*$	1089.65	$1089.44^{+0.99}_{-1.0}$ (-0.7 $\sigma$ )	$\chi^2_{\text{CamSpec}}$	2694.4	2700.1 ( $\nu$ : 5.2)
$\sigma_8$	0.804	$0.840^{+0.12}_{-0.093}$ (+0.1 $\sigma$ )	$r_*$	145.31	$145.38^{+0.97}_{-1.0}$ (+1.0 $\sigma$ )	$\chi^2_{\text{prior}}$	10.03	12.0 ( $\nu$ : 2.0) (+1.1 $\sigma$ )
$\sigma_8 \Omega_m^{0.5}$	0.438	$0.454^{+0.059}_{-0.050}$ (-0.2 $\sigma$ )	$100\theta_*$	1.04146	$1.04153^{+0.00098}_{-0.00096}$ (+0.7 $\sigma$ )			
$\sigma_8 \Omega_m^{0.25}$	0.593	$0.618^{+0.083}_{-0.067}$ (-0.1 $\sigma$ )	$z_{\text{drag}}$	1059.63	$1059.9^{+1.3}_{-1.3}$ (+0.1 $\sigma$ )			

Best-fit  $\chi^2_{\text{eff}} = 2704.45$ ;  $\Delta\chi^2_{\text{eff}} = 1771.35$ ;  $\bar{\chi}^2_{\text{eff}} = 2712.07$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 1765.30$ ;  $R - 1 = 0.00731$   
 $\chi^2_{\text{eff}}$ : CMB - CamSpec like\_v9.10CMH\_unified: 2694.42

## 2.97 base\_CamSpecHM\_TE\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00052}_{-0.00049} \quad (-0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.45^{+0.25}_{-0.20} \quad (-0.4\sigma)$	$100\theta_D$	$0.16092^{+0.00066}_{-0.00068} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1178^{+0.0026}_{-0.0025} \quad (-0.5\sigma)$	$z_{\text{re}}$	$< 17.7 \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3349^{+61}_{-58} \quad (-0.5\sigma)$
$100\theta_{\text{MC}}$	$1.04113^{+0.00086}_{-0.00088} \quad (+0.3\sigma)$	$10^9 A_s$	$< 2.68 \quad (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.823^{+0.011}_{-0.011} \quad (+0.5\sigma)$
$\tau$	$< 0.179 \quad (-0.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.858^{+0.054}_{-0.051} \quad (-0.6\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07207^{+0.00087}_{-0.00086} \quad (+0.5\sigma)$
$\ln(10^{10} A_s)$	$3.08^{+0.22}_{-0.17} \quad (-0.2\sigma)$	$D_{40}$	$1208^{+65}_{-62} \quad (-0.9\sigma)$	$H(0.57)$	$93.21^{+0.62}_{-0.58} \quad (+0.3\sigma)$
$n_s$	$0.976^{+0.025}_{-0.024} \quad (+0.6\sigma)$	$D_{220}$	$5648^{+160}_{-160} \quad (-1.0\sigma)$	$D_A(0.57)$	$1381^{+16}_{-16} \quad (-0.4\sigma)$
$y_{\text{cal}}$	$0.9999^{+0.0049}_{-0.0047} \quad (-0.1\sigma)$	$D_{810}$	$2519^{+78}_{-74} \quad (-0.3\sigma)$	$F_{\text{AP}}(0.57)$	$0.6739^{+0.0039}_{-0.0038} \quad (-0.5\sigma)$
$c_{TE}$	$0.999^{+0.020}_{-0.020}$	$D_{1420}$	$814^{+32}_{-30} \quad (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.476^{+0.056}_{-0.043} \quad (-0.2\sigma)$
$H_0$	$68.1^{+1.2}_{-1.2} \quad (+0.4\sigma)$	$n_{s,0.002}$	$0.976^{+0.025}_{-0.024} \quad (+0.6\sigma)$	$\sigma_8(0.57)$	$0.615^{+0.072}_{-0.056} \quad (-0.1\sigma)$
$\Omega_\Lambda$	$0.697^{+0.015}_{-0.015} \quad (+0.5\sigma)$	$Y_P$	$0.24495^{+0.00022}_{-0.00020} \quad (-3.7\sigma)$	$Y_P^{\text{BBN}}$	$0.24628^{+0.00022}_{-0.00021} \quad (-3.7\sigma)$
$\Omega_m$	$0.303^{+0.015}_{-0.015} \quad (-0.5\sigma)$	Age/Gyr	$13.787^{+0.066}_{-0.065} \quad (-0.2\sigma)$	$\chi^2_{\text{CamSpec}}$	$2699.6 \quad (\nu: 4.5)$
$\Omega_m h^2$	$0.1408^{+0.0025}_{-0.0024} \quad (-0.5\sigma)$	$z_*$	$1089.78^{+0.73}_{-0.74} \quad (-0.1\sigma)$	$\chi^2_{6\text{DF}}$	$0.045 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$\Omega_m h^3$	$0.0959^{+0.0011}_{-0.0010} \quad (-0.1\sigma)$	$r_*$	$145.03^{+0.67}_{-0.70} \quad (+0.5\sigma)$	$\chi^2_{\text{MGS}}$	$1.89 \quad (\nu: 0.2) \quad (+0.5\sigma)$
$\sigma_8$	$0.823^{+0.097}_{-0.074} \quad (-0.1\sigma)$	$100\theta_*$	$1.04133^{+0.00086}_{-0.00087} \quad (+0.4\sigma)$	$\chi^2_{\text{DR11CMASS}}$	$3.05 \quad (\nu: 0.4) \quad (+0.3\sigma)$
$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.052}_{-0.042} \quad (-0.3\sigma)$	$z_{\text{drag}}$	$1059.6^{+1.2}_{-1.1} \quad (-0.2\sigma)$	$\chi^2_{\text{DR11LOWZ}}$	$0.34 \quad (\nu: 0.1) \quad (-0.4\sigma)$
$\sigma_8 \Omega_m^{0.25}$	$0.611^{+0.071}_{-0.055} \quad (-0.2\sigma)$	$r_{\text{drag}}$	$147.73^{+0.75}_{-0.78} \quad (+0.5\sigma)$	$\chi^2_{\text{prior}}$	$12.0 \quad (\nu: 1.9) \quad (+1.1\sigma)$
$\sigma_8/h^{0.5}$	$0.997^{+0.12}_{-0.089} \quad (-0.2\sigma)$	$k_D$	$0.1402^{+0.0010}_{-0.0010} \quad (-0.4\sigma)$	$\chi^2_{\text{BAO}}$	$5.3 \quad (\nu: 0.9) \quad (+0.3\sigma)$

$$\bar{\chi}^2_{\text{eff}} = 2716.95; \Delta\bar{\chi}^2_{\text{eff}} = 1765.77; R - 1 = 0.01268$$

## 2.98 base\_CamSpecHM\_TE\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00051}_{-0.00049} \quad (-0.1\sigma)$	$z_{\text{re}}$	$< 17.9 \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.824^{+0.011}_{-0.011} \quad (+0.5\sigma)$
$\Omega_c h^2$	$0.1176^{+0.0026}_{-0.0024} \quad (-0.5\sigma)$	$10^9 A_s$	$< 2.70 \quad (-0.2\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07214^{+0.00084}_{-0.00083} \quad (+0.5\sigma)$
$100\theta_{\text{MC}}$	$1.04115^{+0.00086}_{-0.00088} \quad (+0.3\sigma)$	$10^9 A_s e^{-2\tau}$	$1.858^{+0.054}_{-0.051} \quad (-0.6\sigma)$	$H(0.57)$	$93.26^{+0.60}_{-0.58} \quad (+0.3\sigma)$
$\tau$	$< 0.184 \quad (-0.1\sigma)$	$D_{40}$	$1207^{+66}_{-63} \quad (-0.9\sigma)$	$D_A(0.57)$	$1379^{+16}_{-16} \quad (-0.4\sigma)$
$\ln(10^{10} A_s)$	$3.09^{+0.22}_{-0.18} \quad (-0.2\sigma)$	$D_{220}$	$5649^{+160}_{-150} \quad (-1.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.6736^{+0.0038}_{-0.0037} \quad (-0.5\sigma)$
$n_s$	$0.977^{+0.025}_{-0.023} \quad (+0.6\sigma)$	$D_{810}$	$2520^{+78}_{-74} \quad (-0.3\sigma)$	$f\sigma_8(0.57)$	$0.477^{+0.057}_{-0.044} \quad (-0.2\sigma)$
$y_{\text{cal}}$	$0.9999^{+0.0049}_{-0.0047} \quad (-0.1\sigma)$	$D_{1420}$	$815^{+32}_{-30} \quad (+0.0\sigma)$	$\sigma_8(0.57)$	$0.616^{+0.074}_{-0.057} \quad (-0.1\sigma)$
$c_{TE}$	$0.999^{+0.020}_{-0.020}$	$n_{s,0.002}$	$0.977^{+0.025}_{-0.023} \quad (+0.6\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24629^{+0.00022}_{-0.00021} \quad (-3.7\sigma)$
$H_0$	$68.3^{+1.1}_{-1.1} \quad (+0.4\sigma)$	$Y_{\text{P}}$	$0.24496^{+0.00022}_{-0.00020} \quad (-3.8\sigma)$	$\chi_{\text{CamSpec}}^2$	$2699.5 \quad (\nu: 4.4)$
$\Omega_\Lambda$	$0.698^{+0.014}_{-0.015} \quad (+0.5\sigma)$	$\text{Age/Gyr}$	$13.783^{+0.062}_{-0.065} \quad (-0.1\sigma)$	$\chi_{\text{H070p6}}^2$	$0.53 \quad (\nu: 0.0) \quad (-0.4\sigma)$
$\Omega_m$	$0.302^{+0.015}_{-0.014} \quad (-0.5\sigma)$	$z_*$	$1089.73^{+0.71}_{-0.72} \quad (-0.1\sigma)$	$\chi_{\text{JLA}}^2$	$706.59 \quad (\nu: 0.0) \quad (-0.4\sigma)$
$\Omega_m h^2$	$0.1406^{+0.0025}_{-0.0024} \quad (-0.5\sigma)$	$r_*$	$145.07^{+0.66}_{-0.68} \quad (+0.5\sigma)$	$\chi_{6\text{DF}}^2$	$0.046 \quad (\nu: 0.0) \quad (+0.1\sigma)$
$\Omega_m h^3$	$0.0960^{+0.0011}_{-0.0010} \quad (-0.1\sigma)$	$100\theta_*$	$1.04135^{+0.00085}_{-0.00087} \quad (+0.3\sigma)$	$\chi_{\text{MGS}}^2$	$2.00 \quad (\nu: 0.2) \quad (+0.5\sigma)$
$\sigma_8$	$0.825^{+0.099}_{-0.076} \quad (-0.1\sigma)$	$z_{\text{drag}}$	$1059.7^{+1.2}_{-1.1} \quad (-0.2\sigma)$	$\chi_{\text{DR11CMass}}^2$	$3.13 \quad (\nu: 0.4) \quad (+0.4\sigma)$
$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.053}_{-0.043} \quad (-0.2\sigma)$	$r_{\text{drag}}$	$147.76^{+0.75}_{-0.76} \quad (+0.5\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.27 \quad (\nu: 0.1) \quad (-0.4\sigma)$
$\sigma_8 \Omega_m^{0.25}$	$0.612^{+0.073}_{-0.057} \quad (-0.2\sigma)$	$k_{\text{D}}$	$0.1402^{+0.0010}_{-0.0010} \quad (-0.4\sigma)$	$\chi_{\text{prior}}^2$	$12.0 \quad (\nu: 1.9) \quad (+1.1\sigma)$
$\sigma_8/h^{0.5}$	$0.999^{+0.12}_{-0.092} \quad (-0.2\sigma)$	$100\theta_{\text{D}}$	$0.16089^{+0.00066}_{-0.00068} \quad (+0.2\sigma)$	$\chi_{\text{BAO}}^2$	$5.4 \quad (\nu: 1.0) \quad (+0.4\sigma)$
$\langle d^2 \rangle^{1/2}$	$2.45^{+0.26}_{-0.20} \quad (-0.3\sigma)$	$z_{\text{eq}}$	$3345^{+59}_{-57} \quad (-0.5\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 3424.10; \Delta \bar{\chi}_{\text{eff}}^2 = 1765.59; R - 1 = 0.01293$$

## 2.99 base\_CamSpecHM\_EE

Parameter	Best fit	95% limits		Parameter	Best fit	95% limits		Parameter	Best fit	95% limits	
$\Omega_b h^2$	0.02464	$0.0245^{+0.0023}_{-0.0021}$	(+0.0 $\sigma$ )	$\sigma_8/h^{0.5}$	1.080	$1.04^{+0.12}_{-0.13}$	(−0.5 $\sigma$ )	$r_{\text{drag}}$	146.34	$146.3^{+1.2}_{-1.2}$	(−0.5 $\sigma$ )
$\Omega_c h^2$	0.1135	$0.1144^{+0.0086}_{-0.0088}$	(+0.3 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.740	$2.63^{+0.29}_{-0.30}$	(−0.4 $\sigma$ )	$k_D$	0.14320	$0.1431^{+0.0021}_{-0.0021}$	(+0.3 $\sigma$ )
$100\theta_{\text{MC}}$	1.03978	$1.0398^{+0.0015}_{-0.0015}$	(−0.1 $\sigma$ )	$z_{\text{re}}$	18.1	$14.5^{+7.8}_{-9.5}$	(−0.6 $\sigma$ )	$100\theta_D$	0.15799	$0.1582^{+0.0022}_{-0.0022}$	(−0.1 $\sigma$ )
$\tau$	0.204	$0.15^{+0.11}_{-0.13}$	(−0.6 $\sigma$ )	$10^9 A_s$	2.86	$2.61^{+0.62}_{-0.64}$	(−0.6 $\sigma$ )	$z_{\text{eq}}$	3301	$3319^{+160}_{-160}$	(+0.3 $\sigma$ )
$\ln(10^{10} A_s)$	3.354	$3.25^{+0.23}_{-0.26}$	(−0.6 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.904	$1.905^{+0.058}_{-0.058}$	(−0.3 $\sigma$ )	$100\theta_{\text{eq}}$	0.8375	$0.834^{+0.035}_{-0.036}$	(−0.3 $\sigma$ )
$n_s$	0.9763	$0.973^{+0.029}_{-0.027}$	(−0.4 $\sigma$ )	$D_{40}$	1359	$1327^{+110}_{-110}$	(−0.4 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07346	$0.0732^{+0.0033}_{-0.0031}$	(−0.2 $\sigma$ )
$y_{\text{cal}}$	0.99996	$1.0001^{+0.0050}_{-0.0049}$	(−0.0 $\sigma$ )	$D_{220}$	6113	$6092^{+370}_{-380}$	(−0.1 $\sigma$ )	$H(0.57)$	95.17	$95.0^{+3.0}_{-2.7}$	(−0.1 $\sigma$ )
$c_{EE}$	0.9995	$0.9997^{+0.020}_{-0.020}$		$D_{810}$	2581	$2581^{+82}_{-83}$	(−0.3 $\sigma$ )	$D_A(0.57)$	1337	$1343^{+69}_{-68}$	(+0.1 $\sigma$ )
$H_0$	71.2	$70.8^{+5.1}_{-5.0}$	(−0.2 $\sigma$ )	$D_{1420}$	837.2	$837^{+34}_{-36}$	(−0.3 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6661	$0.668^{+0.014}_{-0.014}$	(+0.2 $\sigma$ )
$\Omega_\Lambda$	0.726	$0.720^{+0.053}_{-0.054}$	(−0.2 $\sigma$ )	$n_{s,0.002}$	0.9763	$0.973^{+0.029}_{-0.027}$	(−0.4 $\sigma$ )	$f\sigma_8(0.57)$	0.518	$0.496^{+0.057}_{-0.061}$	(−0.5 $\sigma$ )
$\Omega_m$	0.274	$0.280^{+0.054}_{-0.053}$	(+0.2 $\sigma$ )	$Y_P$	0.24590	$0.24583^{+0.00085}_{-0.00086}$	(−0.8 $\sigma$ )	$\sigma_8(0.57)$	0.689	$0.657^{+0.071}_{-0.077}$	(−0.6 $\sigma$ )
$\Omega_m h^2$	0.1388	$0.1395^{+0.0068}_{-0.0069}$	(+0.3 $\sigma$ )	Age/Gyr	13.574	$13.59^{+0.27}_{-0.28}$	(+0.0 $\sigma$ )	$Y_P^{\text{BBN}}$	0.24722	$0.24715^{+0.00085}_{-0.00086}$	(−0.8 $\sigma$ )
$\Omega_m h^3$	0.09884	$0.0987^{+0.0032}_{-0.0030}$	(+0.1 $\sigma$ )	$z_*$	1086.77	$1087.1^{+3.1}_{-2.8}$	(+0.0 $\sigma$ )	$\chi^2_{\text{CamSpec}}$	2183.7	2189.5 ( $\nu$ : 5.3)	
$\sigma_8$	0.911	$0.871^{+0.097}_{-0.10}$	(−0.6 $\sigma$ )	$r_*$	144.38	$144.3^{+1.1}_{-1.1}$	(−0.5 $\sigma$ )	$\chi^2_{\text{prior}}$	10.03	12.1 ( $\nu$ : 2.1) (+1.4 $\sigma$ )	
$\sigma_8 \Omega_m^{0.5}$	0.477	$0.460^{+0.069}_{-0.066}$	(−0.3 $\sigma$ )	$100\theta_*$	1.03974	$1.0397^{+0.0014}_{-0.0014}$	(−0.1 $\sigma$ )				
$\sigma_8 \Omega_m^{0.25}$	0.659	$0.633^{+0.076}_{-0.079}$	(−0.4 $\sigma$ )	$z_{\text{drag}}$	1064.55	$1064.2^{+4.4}_{-4.2}$	(+0.1 $\sigma$ )				

Best-fit  $\chi^2_{\text{eff}} = 2193.74$ ;  $\Delta\chi^2_{\text{eff}} = 1443.17$ ;  $\bar{\chi}^2_{\text{eff}} = 2201.59$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 1437.91$ ;  $R - 1 = 0.00567$

$\chi^2_{\text{eff}}$ : CMB - CamSpec like\_v9.10CMH\_unified: 2183.71

## 2.100 base\_CamSpecHM\_EE\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.0237^{+0.0012}_{-0.0011} (+0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.63^{+0.28}_{-0.27} (-0.7\sigma)$	$100\theta_D$	$0.1589^{+0.0014}_{-0.0014} (-0.5\sigma)$
$\Omega_c h^2$	$0.1178^{+0.0029}_{-0.0029} (+0.1\sigma)$	$z_{\text{re}}$	$13.3^{+8.2}_{-9.1} (-0.7\sigma)$	$z_{\text{eq}}$	$3381^{+62}_{-66} (+0.4\sigma)$
$100\theta_{\text{MC}}$	$1.0395^{+0.0014}_{-0.0013} (+0.1\sigma)$	$10^9 A_s$	$2.49^{+0.57}_{-0.55} (-0.7\sigma)$	$100\theta_{\text{eq}}$	$0.820^{+0.012}_{-0.012} (-0.2\sigma)$
$\tau$	$< 0.227 (-0.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.906^{+0.056}_{-0.057} (-0.2\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0719^{+0.0010}_{-0.00094} (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.21^{+0.22}_{-0.23} (-0.7\sigma)$	$D_{40}$	$1315^{+100}_{-96} (-0.4\sigma)$	$H(0.57)$	$93.9^{+1.1}_{-0.98} (+0.4\sigma)$
$n_s$	$0.964^{+0.018}_{-0.018} (-0.3\sigma)$	$D_{220}$	$5986^{+270}_{-260} (+0.1\sigma)$	$D_A(0.57)$	$1370^{+23}_{-24} (-0.3\sigma)$
$y_{\text{cal}}$	$1.0000^{+0.0051}_{-0.0050} (-0.0\sigma)$	$D_{810}$	$2568^{+75}_{-76} (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6732^{+0.0045}_{-0.0046} (-0.1\sigma)$
$c_{EE}$	$1.000^{+0.019}_{-0.020}$	$D_{1420}$	$829^{+29}_{-30} (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.500^{+0.057}_{-0.057} (-0.7\sigma)$
$H_0$	$68.8^{+1.7}_{-1.6} (+0.3\sigma)$	$n_{s,0.002}$	$0.964^{+0.018}_{-0.018} (-0.3\sigma)$	$\sigma_8(0.57)$	$0.647^{+0.073}_{-0.073} (-0.7\sigma)$
$\Omega_\Lambda$	$0.699^{+0.018}_{-0.018} (+0.1\sigma)$	$Y_P$	$0.24552^{+0.00046}_{-0.00047} (-1.0\sigma)$	$Y_P^{\text{BBN}}$	$0.24685^{+0.00046}_{-0.00046} (-1.0\sigma)$
$\Omega_m$	$0.301^{+0.018}_{-0.018} (-0.1\sigma)$	Age/Gyr	$13.70^{+0.12}_{-0.12} (-0.5\sigma)$	$\chi_{\text{CamSpec}}^2$	$2189.0 (\nu: 3.7)$
$\Omega_m h^2$	$0.1421^{+0.0026}_{-0.0028} (+0.4\sigma)$	$z_*$	$1088.2^{+1.4}_{-1.4} (-0.5\sigma)$	$\chi_{6\text{DF}}^2$	$0.056 (\nu: 0.0) (-0.0\sigma)$
$\Omega_m h^3$	$0.0977^{+0.0021}_{-0.0019} (+0.5\sigma)$	$r_*$	$143.99^{+0.94}_{-0.87} (-0.6\sigma)$	$\chi_{\text{MGS}}^2$	$1.80 (\nu: 0.3) (+0.0\sigma)$
$\sigma_8$	$0.866^{+0.098}_{-0.097} (-0.7\sigma)$	$100\theta_*$	$1.0396^{+0.0014}_{-0.0013} (+0.0\sigma)$	$\chi_{\text{DR11CMass}}^2$	$3.18 (\nu: 0.4) (+0.0\sigma)$
$\sigma_8 \Omega_m^{0.5}$	$0.475^{+0.057}_{-0.057} (-0.7\sigma)$	$z_{\text{drag}}$	$1062.8^{+2.5}_{-2.5} (+0.5\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.47 (\nu: 0.1) (-0.0\sigma)$
$\sigma_8 \Omega_m^{0.25}$	$0.641^{+0.074}_{-0.074} (-0.7\sigma)$	$r_{\text{drag}}$	$146.2^{+1.2}_{-1.1} (-0.6\sigma)$	$\chi_{\text{prior}}^2$	$12.1 (\nu: 2.3) (+1.4\sigma)$
$\sigma_8/h^{0.5}$	$1.04^{+0.12}_{-0.11} (-0.8\sigma)$	$k_D$	$0.1427^{+0.0019}_{-0.0020} (+0.6\sigma)$	$\chi_{\text{BAO}}^2$	$5.5 (\nu: 1.0) (+0.0\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 2206.63; \Delta\bar{\chi}_{\text{eff}}^2 = 1437.57; R - 1 = 0.02332$$

## 2.101 base\_CamSpecHM\_EE\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.0238^{+0.0011}_{-0.0011} \quad (+0.5\sigma)$	$z_{\text{re}}$	$13.3^{+8.1}_{-9.1} \quad (-0.7\sigma)$	$100\theta_{\text{eq}}$	$0.821^{+0.012}_{-0.012} \quad (-0.2\sigma)$
$\Omega_c h^2$	$0.1176^{+0.0028}_{-0.0028} \quad (+0.2\sigma)$	$10^9 A_s$	$2.50^{+0.56}_{-0.55} \quad (-0.7\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07196^{+0.00095}_{-0.00089} \quad (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.0395^{+0.0014}_{-0.0013} \quad (+0.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.907^{+0.056}_{-0.057} \quad (-0.2\sigma)$	$H(0.57)$	$93.9^{+1.0}_{-0.95} \quad (+0.4\sigma)$
$\tau$	$< 0.228 \quad (-0.7\sigma)$	$D_{40}$	$1316^{+100}_{-96} \quad (-0.4\sigma)$	$D_A(0.57)$	$1368^{+21}_{-23} \quad (-0.3\sigma)$
$\ln(10^{10} A_s)$	$3.21^{+0.22}_{-0.22} \quad (-0.7\sigma)$	$D_{220}$	$5998^{+270}_{-270} \quad (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6729^{+0.0044}_{-0.0044} \quad (-0.1\sigma)$
$n_s$	$0.965^{+0.018}_{-0.018} \quad (-0.3\sigma)$	$D_{810}$	$2570^{+74}_{-75} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.500^{+0.056}_{-0.055} \quad (-0.7\sigma)$
$y_{\text{cal}}$	$0.99999^{+0.0051}_{-0.0050} \quad (-0.0\sigma)$	$D_{1420}$	$830^{+28}_{-29} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.648^{+0.073}_{-0.073} \quad (-0.7\sigma)$
$c_{EE}$	$1.000^{+0.019}_{-0.020}$	$n_{s,0.002}$	$0.965^{+0.018}_{-0.018} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24688^{+0.00044}_{-0.00044} \quad (-1.1\sigma)$
$H_0$	$68.9^{+1.6}_{-1.5} \quad (+0.2\sigma)$	$Y_{\text{P}}$	$0.24555^{+0.00044}_{-0.00044} \quad (-1.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$2189.0 \quad (\nu: 3.7)$
$\Omega_\Lambda$	$0.701^{+0.017}_{-0.017} \quad (+0.1\sigma)$	Age/Gyr	$13.69^{+0.11}_{-0.12} \quad (-0.5\sigma)$	$\chi_{\text{H070p6}}^2$	$0.32 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$\Omega_m$	$0.299^{+0.017}_{-0.017} \quad (-0.1\sigma)$	$z_*$	$1088.1^{+1.4}_{-1.3} \quad (-0.4\sigma)$	$\chi_{\text{JLA}}^2$	$706.58 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$\Omega_m h^2$	$0.1420^{+0.0026}_{-0.0027} \quad (+0.4\sigma)$	$r_*$	$143.99^{+0.94}_{-0.88} \quad (-0.5\sigma)$	$\chi_{6\text{DF}}^2$	$0.053 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$\Omega_m h^3$	$0.0978^{+0.0021}_{-0.0019} \quad (+0.5\sigma)$	$100\theta_*$	$1.0396^{+0.0014}_{-0.0013} \quad (+0.0\sigma)$	$\chi_{\text{MGS}}^2$	$1.90 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$\sigma_8$	$0.866^{+0.097}_{-0.098} \quad (-0.7\sigma)$	$z_{\text{drag}}$	$1062.9^{+2.4}_{-2.4} \quad (+0.5\sigma)$	$\chi_{\text{DR11CMass}}^2$	$3.18 \quad (\nu: 0.4) \quad (+0.0\sigma)$
$\sigma_8 \Omega_m^{0.5}$	$0.474^{+0.056}_{-0.057} \quad (-0.7\sigma)$	$r_{\text{drag}}$	$146.2^{+1.2}_{-1.1} \quad (-0.5\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.39 \quad (\nu: 0.1) \quad (-0.0\sigma)$
$\sigma_8 \Omega_m^{0.25}$	$0.641^{+0.073}_{-0.071} \quad (-0.7\sigma)$	$k_{\text{D}}$	$0.1428^{+0.0019}_{-0.0019} \quad (+0.5\sigma)$	$\chi_{\text{prior}}^2$	$12.1 \quad (\nu: 2.3) \quad (+1.4\sigma)$
$\sigma_8/h^{0.5}$	$1.04^{+0.12}_{-0.12} \quad (-0.7\sigma)$	$100\theta_{\text{D}}$	$0.1588^{+0.0014}_{-0.0014} \quad (-0.5\sigma)$	$\chi_{\text{BAO}}^2$	$5.5 \quad (\nu: 0.9) \quad (+0.0\sigma)$
$\langle d^2 \rangle^{1/2}$	$2.63^{+0.28}_{-0.27} \quad (-0.7\sigma)$	$z_{\text{eq}}$	$3378^{+61}_{-64} \quad (+0.4\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 2913.44; \Delta \bar{\chi}_{\text{eff}}^2 = 1437.52; R - 1 = 0.02531$$

## 2.102 base\_plikHM\_TE\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02230	$0.02231^{+0.00054}_{-0.00051}$	$\sigma_8 \Omega_m^{0.5}$	0.4478	$0.449^{+0.018}_{-0.018}$	$D_A/\text{Gpc}$	13.914	$13.916^{+0.090}_{-0.089}$
$\Omega_c h^2$	0.11855	$0.1185^{+0.0043}_{-0.0043}$	$\sigma_8 \Omega_m^{0.25}$	0.6012	$0.603^{+0.017}_{-0.017}$	$z_{\text{drag}}$	1059.67	$1059.7^{+1.1}_{-1.0}$
$100\theta_{\text{MC}}$	1.04090	$1.0409^{+0.0010}_{-0.0010}$	$\sigma_8/h^{0.5}$	0.9802	$0.983^{+0.026}_{-0.026}$	$r_{\text{drag}}$	147.55	$147.57^{+0.98}_{-0.95}$
$\tau$	0.0595	$0.063^{+0.042}_{-0.041}$	$\langle d^2 \rangle^{1/2}$	2.431	$2.437^{+0.074}_{-0.073}$	$k_D$	0.14033	$0.1403^{+0.0011}_{-0.0011}$
$\ln(10^{10} A_s)$	3.045	$3.051^{+0.075}_{-0.074}$	$z_{\text{re}}$	8.19	$8.4^{+4.0}_{-4.3}$	$100\theta_D$	0.16089	$0.16090^{+0.00062}_{-0.00063}$
$n_s$	0.9656	$0.966^{+0.024}_{-0.024}$	$10^9 A_s$	2.101	$2.12^{+0.16}_{-0.15}$	$z_{\text{eq}}$	3366	$3364^{+97}_{-97}$
$y_{\text{cal}}$	0.99984	$1.0000^{+0.0050}_{-0.0048}$	$10^9 A_s e^{-2\tau}$	1.8657	$1.866^{+0.032}_{-0.032}$	$k_{\text{eq}}$	0.010274	$0.01027^{+0.00029}_{-0.00030}$
$A_{100}^{\text{dustTE}}$	0.135	$0.137^{+0.076}_{-0.074}$	$D_{40}$	1224	$1225^{+52}_{-49}$	$100\theta_{\text{eq}}$	0.8196	$0.820^{+0.019}_{-0.018}$
$A_{100 \times 143}^{\text{dustTE}}$	0.129	$0.133^{+0.057}_{-0.058}$	$D_{220}$	5707	$5707^{+120}_{-110}$	$100\theta_{s,\text{eq}}$	0.4527	$0.4530^{+0.0098}_{-0.0094}$
$A_{100 \times 217}^{\text{dustTE}}$	0.297	$0.30^{+0.16}_{-0.17}$	$D_{810}$	2520.2	$2520^{+45}_{-46}$	$r_{\text{drag}}/D_V(0.57)$	0.07178	$0.0718^{+0.0015}_{-0.0015}$
$A_{143}^{\text{dustTE}}$	0.146	$0.15^{+0.11}_{-0.10}$	$D_{1420}$	810.2	$810^{+22}_{-22}$	$H(0.57)$	93.06	$93.09^{+0.94}_{-0.85}$
$A_{143 \times 217}^{\text{dustTE}}$	0.340	$0.33^{+0.16}_{-0.16}$	$D_{2000}$	228.6	$228.7^{+8.2}_{-8.0}$	$D_A(0.57)$	1385.2	$1385^{+27}_{-27}$
$A_{217}^{\text{dustTE}}$	1.68	$1.65^{+0.50}_{-0.50}$	$n_{s,0.002}$	0.9656	$0.966^{+0.024}_{-0.024}$	$F_{\text{AP}}(0.57)$	0.6751	$0.6750^{+0.0068}_{-0.0066}$
$c_{100}$	0.99943	$0.9993^{+0.0020}_{-0.0019}$	$Y_P$	0.245364	$0.24536^{+0.00024}_{-0.00023}$	$f\sigma_8(0.57)$	0.4683	$0.469^{+0.013}_{-0.013}$
$H_0$	67.80	$67.9^{+2.0}_{-2.0}$	$Y_P^{\text{BBN}}$	0.246690	$0.24669^{+0.00024}_{-0.00023}$	$\sigma_8(0.57)$	0.6013	$0.603^{+0.023}_{-0.021}$
$\Omega_\Lambda$	0.6922	$0.693^{+0.025}_{-0.027}$	$10^5 D/H$	2.604	$2.604^{+0.098}_{-0.10}$	$\chi^2_{\text{lensing}}$	8.72	$9.7 (\nu: 1.0)$
$\Omega_m$	0.3078	$0.307^{+0.027}_{-0.025}$	Age/Gyr	13.799	$13.796^{+0.082}_{-0.085}$	$\chi^2_{\text{plikTE}}$	931.1	$938.3 (\nu: 7.9)$
$\Omega_m h^2$	0.14150	$0.1414^{+0.0040}_{-0.0041}$	$z_*$	1089.87	$1089.87^{+0.93}_{-0.92}$	$\chi^2_{\text{prior}}$	2.1	$7.8 (\nu: 6.5)$
$\Omega_m h^3$	0.09594	$0.0959^{+0.0010}_{-0.00099}$	$r_*$	144.86	$144.88^{+0.98}_{-0.95}$	$\chi^2_{\text{CMB}}$	939.8	$948.1 (\nu: 8.9)$
$\sigma_8$	0.8071	$0.809^{+0.025}_{-0.024}$	$100\theta_*$	1.04109	$1.0411^{+0.0010}_{-0.00099}$			

Best-fit  $\chi^2_{\text{eff}} = 941.87$ ;  $\bar{\chi}^2_{\text{eff}} = 955.88$ ;  $R - 1 = 0.00937$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 8.71 plik\_dx11dr2\_HM\_v18\_TE: 931.06

## 2.103 base\_plikHM\_TE\_lensing\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022296	$0.02230^{+0.00045}_{-0.00043}$	$\sigma_8/h^{0.5}$	0.9821	$0.982^{+0.027}_{-0.026}$	$100\theta_D$	0.16092	$0.16090^{+0.00059}_{-0.00061}$
$\Omega_c h^2$	0.11851	$0.1185^{+0.0026}_{-0.0025}$	$\langle d^2 \rangle^{1/2}$	2.437	$2.436^{+0.074}_{-0.073}$	$z_{\text{eq}}$	3365	$3366^{+58}_{-58}$
$100\theta_{\text{MC}}$	1.04097	$1.04093^{+0.00093}_{-0.00090}$	$z_{\text{re}}$	8.43	$8.3^{+3.3}_{-3.4}$	$k_{\text{eq}}$	0.010270	$0.01027^{+0.00018}_{-0.00018}$
$\tau$	0.0619	$0.062^{+0.033}_{-0.033}$	$10^9 A_s$	2.111	$2.11^{+0.13}_{-0.12}$	$100\theta_{\text{eq}}$	0.8199	$0.820^{+0.011}_{-0.011}$
$\ln(10^{10} A_s)$	3.050	$3.049^{+0.060}_{-0.059}$	$10^9 A_s e^{-2\tau}$	1.8655	$1.866^{+0.030}_{-0.029}$	$100\theta_{s,\text{eq}}$	0.4529	$0.4528^{+0.0057}_{-0.0056}$
$n_s$	0.9653	$0.966^{+0.020}_{-0.020}$	$D_{40}$	1225.3	$1225^{+49}_{-46}$	$r_{\text{drag}}/D_V(0.57)$	0.07181	$0.07179^{+0.00086}_{-0.00083}$
$y_{\text{cal}}$	0.99999	$1.0000^{+0.0050}_{-0.0048}$	$D_{220}$	5708	$5707^{+120}_{-110}$	$H(0.57)$	93.08	$93.07^{+0.57}_{-0.56}$
$A_{100}^{\text{dustTE}}$	0.138	$0.138^{+0.075}_{-0.073}$	$D_{810}$	2519.8	$2520^{+44}_{-45}$	$D_A(0.57)$	1384.8	$1385^{+16}_{-15}$
$A_{100 \times 143}^{\text{dustTE}}$	0.135	$0.133^{+0.057}_{-0.058}$	$D_{1420}$	809.9	$810^{+21}_{-21}$	$F_{\text{AP}}(0.57)$	0.67499	$0.6751^{+0.0038}_{-0.0038}$
$A_{100 \times 217}^{\text{dustTE}}$	0.299	$0.30^{+0.16}_{-0.17}$	$D_{2000}$	228.5	$228.7^{+7.5}_{-7.6}$	$f\sigma_8(0.57)$	0.4693	$0.469^{+0.013}_{-0.013}$
$A_{143}^{\text{dustTE}}$	0.156	$0.15^{+0.10}_{-0.10}$	$n_{s,0.002}$	0.9653	$0.966^{+0.020}_{-0.020}$	$\sigma_8(0.57)$	0.6027	$0.603^{+0.019}_{-0.018}$
$A_{143 \times 217}^{\text{dustTE}}$	0.332	$0.34^{+0.15}_{-0.16}$	$Y_{\text{P}}$	0.245360	$0.24536^{+0.00020}_{-0.00020}$	$\chi^2_{\text{lensing}}$	8.70	$9.7 (\nu: 1.0)$
$A_{217}^{\text{dustTE}}$	1.64	$1.65^{+0.49}_{-0.50}$	$Y_{\text{P}}^{\text{BBN}}$	0.246687	$0.24669^{+0.00020}_{-0.00020}$	$\chi^2_{\text{plikTE}}$	931.4	$937.6 (\nu: 7.1)$
$c_{100}$	0.99923	$0.9993^{+0.0020}_{-0.0020}$	$10^5 D/H$	2.605	$2.605^{+0.084}_{-0.084}$	$\chi^2_{6\text{DF}}$	0.006	$0.049 (\nu: 0.0)$
$H_0$	67.83	$67.8^{+1.1}_{-1.1}$	Age/Gyr	13.797	$13.798^{+0.059}_{-0.061}$	$\chi^2_{\text{MGS}}$	1.47	$1.52 (\nu: 0.2)$
$\Omega_\Lambda$	0.6926	$0.692^{+0.015}_{-0.015}$	$z_*$	1089.88	$1089.88^{+0.67}_{-0.66}$	$\chi^2_{\text{DR11CMAS}}$	2.41	$2.87 (\nu: 0.2)$
$\Omega_m$	0.3074	$0.308^{+0.015}_{-0.015}$	$r_*$	144.87	$144.86^{+0.65}_{-0.65}$	$\chi^2_{\text{DR11LOWZ}}$	0.43	$0.59 (\nu: 0.1)$
$\Omega_m h^2$	0.14145	$0.1415^{+0.0024}_{-0.0024}$	$100\theta_*$	1.04116	$1.04112^{+0.00092}_{-0.00091}$	$\chi^2_{\text{prior}}$	1.8	$7.8 (\nu: 6.6)$
$\Omega_m h^3$	0.09595	$0.0959^{+0.0010}_{-0.00098}$	$D_A/\text{Gpc}$	13.915	$13.914^{+0.063}_{-0.064}$	$\chi^2_{\text{CMB}}$	940.1	$947.4 (\nu: 8.0)$
$\sigma_8$	0.8089	$0.809^{+0.023}_{-0.022}$	$z_{\text{drag}}$	1059.67	$1059.7^{+1.1}_{-1.0}$	$\chi^2_{\text{BAO}}$	4.31	$5.02 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.5}$	0.4485	$0.449^{+0.014}_{-0.014}$	$r_{\text{drag}}$	147.57	$147.56^{+0.71}_{-0.73}$			
$\sigma_8 \Omega_m^{0.25}$	0.6023	$0.602^{+0.017}_{-0.016}$	$k_D$	0.14031	$0.14032^{+0.00097}_{-0.00095}$			

Best-fit  $\chi^2_{\text{eff}} = 946.19$ ;  $\bar{\chi}^2_{\text{eff}} = 960.24$ ;  $R - 1 = 0.01208$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMAS: 2.41 DR11LOWZ: 0.43 CMB - smica\_g30\_ftl\_full\_pp: 8.70 plik\_dx11dr2\_HM\_v18\_TE: 931.38



## 2.104 base\_plikHM\_TE\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022314	$0.02233^{+0.00045}_{-0.00043}$	$\sigma_8/h^{0.5}$	0.9820	$0.982^{+0.027}_{-0.026}$	$100\theta_D$	0.16090	$0.16088^{+0.00059}_{-0.00060}$
$\Omega_c h^2$	0.11835	$0.1183^{+0.0024}_{-0.0024}$	$\langle d^2 \rangle^{1/2}$	2.434	$2.435^{+0.074}_{-0.073}$	$z_{\text{eq}}$	3361	$3360^{+57}_{-57}$
$100\theta_{\text{MC}}$	1.04096	$1.04096^{+0.00093}_{-0.00089}$	$z_{\text{re}}$	8.48	$8.5^{+3.2}_{-3.4}$	$k_{\text{eq}}$	0.010260	$0.01026^{+0.00017}_{-0.00017}$
$\tau$	0.0625	$0.063^{+0.032}_{-0.033}$	$10^9 A_s$	2.114	$2.12^{+0.13}_{-0.12}$	$100\theta_{\text{eq}}$	0.8205	$0.821^{+0.011}_{-0.010}$
$\ln(10^{10} A_s)$	3.051	$3.053^{+0.059}_{-0.059}$	$10^9 A_s e^{-2\tau}$	1.8657	$1.865^{+0.030}_{-0.030}$	$100\theta_{s,\text{eq}}$	0.4532	$0.4533^{+0.0055}_{-0.0054}$
$n_s$	0.9666	$0.967^{+0.020}_{-0.020}$	$D_{40}$	1223.0	$1224^{+48}_{-45}$	$r_{\text{drag}}/D_V(0.57)$	0.07186	$0.07189^{+0.00083}_{-0.00082}$
$y_{\text{cal}}$	1.00001	$1.0000^{+0.0050}_{-0.0049}$	$D_{220}$	5708	$5708^{+120}_{-110}$	$H(0.57)$	93.11	$93.13^{+0.56}_{-0.55}$
$A_{100}^{\text{dustTE}}$	0.138	$0.137^{+0.075}_{-0.072}$	$D_{810}$	2521.4	$2521^{+45}_{-45}$	$D_A(0.57)$	1383.9	$1383^{+15}_{-15}$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.133^{+0.057}_{-0.058}$	$D_{1420}$	810.9	$811^{+21}_{-21}$	$F_{\text{AP}}(0.57)$	0.67475	$0.6747^{+0.0038}_{-0.0037}$
$A_{100 \times 217}^{\text{dustTE}}$	0.306	$0.30^{+0.17}_{-0.17}$	$D_{2000}$	228.9	$228.9^{+7.5}_{-7.6}$	$f\sigma_8(0.57)$	0.4692	$0.469^{+0.013}_{-0.013}$
$A_{143}^{\text{dustTE}}$	0.152	$0.15^{+0.10}_{-0.10}$	$n_{s,0.002}$	0.9666	$0.967^{+0.020}_{-0.020}$	$\sigma_8(0.57)$	0.6032	$0.604^{+0.019}_{-0.018}$
$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.33^{+0.15}_{-0.16}$	$Y_{\text{P}}$	0.245368	$0.24537^{+0.00020}_{-0.00020}$	$\chi^2_{\text{lensing}}$	8.69	$9.7 (\nu: 1.0)$
$A_{217}^{\text{dustTE}}$	1.66	$1.65^{+0.49}_{-0.50}$	$Y_{\text{P}}^{\text{BBN}}$	0.246695	$0.24670^{+0.00020}_{-0.00020}$	$\chi^2_{\text{plikTE}}$	931.3	$937.6 (\nu: 7.0)$
$c_{100}$	0.99927	$0.9993^{+0.0020}_{-0.0020}$	$10^5 D/H$	2.602	$2.599^{+0.083}_{-0.083}$	$\chi^2_{\text{H070p6}}$	0.66	$0.67 (\nu: 0.0)$
$H_0$	67.90	$67.9^{+1.1}_{-1.1}$	Age/Gyr	13.795	$13.793^{+0.059}_{-0.060}$	$\chi^2_{\text{JLA}}$	706.623	$706.66 (\nu: 0.0)$
$\Omega_\Lambda$	0.6935	$0.694^{+0.014}_{-0.015}$	$z_*$	1089.85	$1089.82^{+0.65}_{-0.64}$	$\chi^2_{6\text{DF}}$	0.003	$0.040 (\nu: 0.0)$
$\Omega_m$	0.3065	$0.306^{+0.015}_{-0.014}$	$r_*$	144.90	$144.91^{+0.64}_{-0.64}$	$\chi^2_{\text{MGS}}$	1.54	$1.64 (\nu: 0.2)$
$\Omega_m h^2$	0.14131	$0.1413^{+0.0024}_{-0.0024}$	$100\theta_*$	1.04116	$1.04115^{+0.00091}_{-0.00090}$	$\chi^2_{\text{DR11CMass}}$	2.42	$2.85 (\nu: 0.2)$
$\Omega_m h^3$	0.09596	$0.0960^{+0.0010}_{-0.00098}$	$D_A/\text{Gpc}$	13.917	$13.918^{+0.063}_{-0.064}$	$\chi^2_{\text{DR11LOWZ}}$	0.37	$0.48 (\nu: 0.1)$
$\sigma_8$	0.8092	$0.810^{+0.023}_{-0.022}$	$z_{\text{drag}}$	1059.70	$1059.7^{+1.0}_{-0.99}$	$\chi^2_{\text{prior}}$	1.9	$7.8 (\nu: 6.6)$
$\sigma_8 \Omega_m^{0.5}$	0.4480	$0.448^{+0.014}_{-0.014}$	$r_{\text{drag}}$	147.59	$147.59^{+0.70}_{-0.73}$	$\chi^2_{\text{CMB}}$	940.0	$947.4 (\nu: 8.0)$
$\sigma_8 \Omega_m^{0.25}$	0.6021	$0.602^{+0.017}_{-0.016}$	$k_D$	0.14030	$0.14031^{+0.00097}_{-0.00094}$	$\chi^2_{\text{BAO}}$	4.33	$5.01 (\nu: 0.5)$

Best-fit  $\chi^2_{\text{eff}} = 1653.50$ ;  $\bar{\chi}^2_{\text{eff}} = 1667.55$ ;  $R - 1 = 0.01133$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.54 DR11CMass: 2.42 DR11LOWZ: 0.37 CMB - smica\_g30\_ftl\_full\_pp: 8.69 plik\_dx11dr2\_HM\_v18\_TE: 931.28 Hubble - H070p6: 0.66 SN  
- JLA December\_2013: 706.62

## 2.105 base\_plikHM\_EE\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02329	$0.0235^{+0.0021}_{-0.0020}$	$\sigma_8 \Omega_m^{0.25}$	0.5776	$0.576^{+0.038}_{-0.039}$	$z_{\text{drag}}$	1061.76	$1062.1^{+4.2}_{-4.2}$
$\Omega_c h^2$	0.1163	$0.1149^{+0.0077}_{-0.0079}$	$\sigma_8/h^{0.5}$	0.944	$0.943^{+0.055}_{-0.058}$	$r_{\text{drag}}$	147.05	$147.2^{+1.4}_{-1.4}$
$100\theta_{\text{MC}}$	1.04015	$1.0403^{+0.0018}_{-0.0017}$	$\langle d^2 \rangle^{1/2}$	2.365	$2.36^{+0.11}_{-0.11}$	$k_{\text{D}}$	0.14158	$0.1415^{+0.0023}_{-0.0024}$
$\tau$	0.0384	$< 0.0973$	$z_{\text{re}}$	5.77	$6.8^{+4.7}_{-4.8}$	$100\theta_{\text{D}}$	0.15955	$0.1594^{+0.0023}_{-0.0023}$
$\ln(10^{10} A_s)$	3.018	$3.039^{+0.091}_{-0.080}$	$10^9 A_s$	2.045	$2.09^{+0.19}_{-0.17}$	$z_{\text{eq}}$	3337	$3307^{+150}_{-150}$
$n_s$	0.9693	$0.974^{+0.030}_{-0.029}$	$10^9 A_s e^{-2\tau}$	1.8939	$1.888^{+0.044}_{-0.046}$	$k_{\text{eq}}$	0.010184	$0.01009^{+0.00045}_{-0.00047}$
$y_{\text{cal}}$	0.99999	$0.9999^{+0.0049}_{-0.0049}$	$D_{40}$	1241	$1236^{+62}_{-60}$	$100\theta_{\text{eq}}$	0.8272	$0.834^{+0.035}_{-0.032}$
$A_{100}^{\text{dustEE}}$	0.0809	$0.081^{+0.012}_{-0.012}$	$D_{220}$	5914	$5925^{+340}_{-330}$	$100\theta_{\text{s,eq}}$	0.4559	$0.459^{+0.017}_{-0.015}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0472	$0.049^{+0.011}_{-0.011}$	$D_{810}$	2569	$2568^{+72}_{-73}$	$r_{\text{drag}}/D_V(0.57)$	0.07243	$0.0730^{+0.0032}_{-0.0028}$
$A_{100 \times 217}^{\text{dustEE}}$	0.105	$0.099^{+0.064}_{-0.064}$	$D_{1420}$	830.9	$832^{+35}_{-36}$	$H(0.57)$	93.87	$94.3^{+2.8}_{-2.6}$
$A_{143}^{\text{dustEE}}$	0.0988	$0.0998^{+0.014}_{-0.014}$	$D_{2000}$	235.6	$236^{+13}_{-14}$	$D_A(0.57)$	1366	$1356^{+63}_{-65}$
$A_{143 \times 217}^{\text{dustEE}}$	0.222	$0.224^{+0.092}_{-0.092}$	$n_{\text{s},0.002}$	0.9693	$0.974^{+0.030}_{-0.029}$	$F_{\text{AP}}(0.57)$	0.6713	$0.669^{+0.014}_{-0.013}$
$A_{217}^{\text{dustEE}}$	0.655	$0.65^{+0.26}_{-0.26}$	$Y_{\text{P}}$	0.24579	$0.24586^{+0.00085}_{-0.00087}$	$f\sigma_8(0.57)$	0.4516	$0.451^{+0.025}_{-0.027}$
$H_0$	69.16	$69.9^{+4.9}_{-4.5}$	$Y_{\text{P}}^{\text{BBN}}$	0.24711	$0.24719^{+0.00085}_{-0.00088}$	$\sigma_8(0.57)$	0.5882	$0.593^{+0.026}_{-0.023}$
$\Omega_{\Lambda}$	0.707	$0.714^{+0.051}_{-0.051}$	$10^5 \text{D}/\text{H}$	2.429	$2.40^{+0.35}_{-0.34}$	$\chi^2_{\text{lensing}}$	9.12	$10.6 (\nu: 1.4)$
$\Omega_{\text{m}}$	0.293	$0.286^{+0.051}_{-0.051}$	Age/Gyr	13.712	$13.68^{+0.26}_{-0.27}$	$\chi^2_{\text{plikEE}}$	751.8	$758.4 (\nu: 8.6)$
$\Omega_{\text{m}} h^2$	0.1403	$0.1390^{+0.0061}_{-0.0064}$	$z_*$	1088.50	$1088.2^{+3.0}_{-2.8}$	$\chi^2_{\text{prior}}$	3.4	$8.0 (\nu: 6.1)$
$\Omega_{\text{m}} h^3$	0.09701	$0.0972^{+0.0033}_{-0.0031}$	$r_*$	144.68	$144.9^{+1.3}_{-1.2}$	$\chi^2_{\text{CMB}}$	761.0	$768.9 (\nu: 9.7)$
$\sigma_8$	0.7848	$0.788^{+0.034}_{-0.031}$	$100\theta_*$	1.04024	$1.0403^{+0.0017}_{-0.0016}$			
$\sigma_8 \Omega_{\text{m}}^{0.5}$	0.4250	$0.421^{+0.045}_{-0.044}$	$D_{\text{A}}/\text{Gpc}$	13.908	$13.93^{+0.12}_{-0.12}$			

Best-fit  $\chi^2_{\text{eff}} = 764.31$ ;  $\bar{\chi}^2_{\text{eff}} = 776.92$ ;  $R - 1 = 0.00961$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.12 plik\_dx11dr2\_HM\_v18\_EE: 751.83

## 2.106 base\_plikHM\_EE\_lensing\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02289	$0.0228^{+0.0012}_{-0.0012}$	$\sigma_8/h^{0.5}$	0.9522	$0.957^{+0.041}_{-0.039}$	$k_D$	0.14127	$0.1411^{+0.0021}_{-0.0022}$
$\Omega_c h^2$	0.11792	$0.1177^{+0.0029}_{-0.0029}$	$\langle d^2 \rangle^{1/2}$	2.377	$2.387^{+0.091}_{-0.088}$	$100\theta_D$	0.15997	$0.1601^{+0.0016}_{-0.0015}$
$100\theta_{MC}$	1.03985	$1.0399^{+0.0015}_{-0.0015}$	$z_{re}$	5.24	$5.9^{+4.2}_{-4.0}$	$z_{eq}$	3365	$3358^{+65}_{-67}$
$\tau$	0.0330	$< 0.0757$	$10^9 A_s$	2.021	$2.05^{+0.14}_{-0.12}$	$k_{eq}$	0.010270	$0.01025^{+0.00020}_{-0.00020}$
$\ln(10^{10} A_s)$	3.006	$3.018^{+0.065}_{-0.058}$	$10^9 A_s e^{-2\tau}$	1.8923	$1.888^{+0.041}_{-0.045}$	$100\theta_{eq}$	0.8206	$0.822^{+0.012}_{-0.012}$
$n_s$	0.9656	$0.966^{+0.021}_{-0.022}$	$D_{40}$	1240	$1238^{+63}_{-61}$	$100\theta_{s,eq}$	0.4528	$0.4535^{+0.0063}_{-0.0060}$
$y_{cal}$	0.99980	$0.9998^{+0.0049}_{-0.0048}$	$D_{220}$	5854	$5839^{+240}_{-250}$	$r_{drag}/D_V(0.57)$	0.07180	$0.07190^{+0.00097}_{-0.00093}$
$A_{100}^{dustEE}$	0.0808	$0.081^{+0.012}_{-0.012}$	$D_{810}$	2560	$2555^{+60}_{-64}$	$H(0.57)$	93.31	$93.3^{+1.1}_{-1.1}$
$A_{100 \times 143}^{dustEE}$	0.0479	$0.048^{+0.011}_{-0.011}$	$D_{1420}$	825.5	$824^{+27}_{-28}$	$D_A(0.57)$	1379.7	$1379^{+24}_{-24}$
$A_{100 \times 217}^{dustEE}$	0.098	$0.0996^{+0.063}_{-0.065}$	$D_{2000}$	233.4	$232.9^{+9.7}_{-9.8}$	$F_{AP}(0.57)$	0.67424	$0.6739^{+0.0047}_{-0.0046}$
$A_{143}^{dustEE}$	0.0991	$0.099^{+0.015}_{-0.014}$	$n_{s,0.002}$	0.9656	$0.966^{+0.021}_{-0.022}$	$f\sigma_8(0.57)$	0.4553	$0.457^{+0.019}_{-0.018}$
$A_{143 \times 217}^{dustEE}$	0.223	$0.224^{+0.091}_{-0.092}$	$Y_P$	0.24562	$0.24559^{+0.00048}_{-0.00052}$	$\sigma_8(0.57)$	0.5865	$0.590^{+0.022}_{-0.019}$
$A_{217}^{dustEE}$	0.656	$0.65^{+0.25}_{-0.25}$	$Y_{BBN}$	0.24695	$0.24692^{+0.00048}_{-0.00052}$	$\chi^2_{lensing}$	9.00	$10.0 (\nu: 1.0)$
$H_0$	68.16	$68.2^{+1.7}_{-1.6}$	$10^5 D/H$	2.497	$2.51^{+0.21}_{-0.21}$	$\chi^2_{plikEE}$	752.0	$758.2 (\nu: 7.9)$
$\Omega_\Lambda$	0.6955	$0.697^{+0.018}_{-0.018}$	Age/Gyr	13.768	$13.77^{+0.13}_{-0.13}$	$\chi^2_{6DF}$	0.003	$0.056 (\nu: 0.0)$
$\Omega_m$	0.3045	$0.303^{+0.018}_{-0.018}$	$z_*$	1089.11	$1089.2^{+1.5}_{-1.5}$	$\chi^2_{MGS}$	1.54	$1.74 (\nu: 0.2)$
$\Omega_m h^2$	0.14145	$0.1412^{+0.0027}_{-0.0028}$	$r_*$	144.57	$144.7^{+1.0}_{-0.92}$	$\chi^2_{DR11CMAS}$	2.49	$3.10 (\nu: 0.4)$
$\Omega_m h^3$	0.09641	$0.0963^{+0.0022}_{-0.0023}$	$100\theta_*$	1.03999	$1.0401^{+0.0015}_{-0.0015}$	$\chi^2_{DR11LOWZ}$	0.39	$0.49 (\nu: 0.1)$
$\sigma_8$	0.7862	$0.790^{+0.030}_{-0.027}$	$D_A/\text{Gpc}$	13.901	$13.91^{+0.10}_{-0.093}$	$\chi^2_{prior}$	3.5	$7.9 (\nu: 6.0)$
$\sigma_8 \Omega_m^{0.5}$	0.4338	$0.435^{+0.023}_{-0.022}$	$z_{drag}$	1060.96	$1060.8^{+2.5}_{-2.7}$	$\chi^2_{CMB}$	761.0	$768.2 (\nu: 8.6)$
$\sigma_8 \Omega_m^{0.25}$	0.5840	$0.587^{+0.026}_{-0.024}$	$r_{drag}$	147.07	$147.2^{+1.4}_{-1.2}$	$\chi^2_{BAO}$	4.43	$5.4 (\nu: 0.9)$

Best-fit  $\chi^2_{eff} = 768.95$ ;  $\bar{\chi}^2_{eff} = 781.51$ ;  $R - 1 = 0.01617$

$\chi^2_{eff}$ : BAO - 6DF: 0.00 MGS: 1.54 DR11CMAS: 2.49 DR11LOWZ: 0.40 CMB - smica\_g30\_ftl\_full\_pp: 9.00 plik\_dx11dr2\_HM\_v18\_EE: 752.02

## 2.107 base\_plikHM\_EE\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02302	$0.0229^{+0.0011}_{-0.0011}$	$\langle d^2 \rangle^{1/2}$	2.374	$2.383^{+0.090}_{-0.086}$	$z_{\text{eq}}$	3363	$3354^{+63}_{-65}$
$\Omega_c h^2$	0.11773	$0.1174^{+0.0028}_{-0.0028}$	$z_{\text{re}}$	5.14	$5.9^{+4.2}_{-4.0}$	$k_{\text{eq}}$	0.010266	$0.01024^{+0.00019}_{-0.00020}$
$100\theta_{\text{MC}}$	1.03993	$1.0400^{+0.0015}_{-0.0015}$	$10^9 A_s$	2.021	$2.05^{+0.14}_{-0.12}$	$100\theta_{\text{eq}}$	0.8213	$0.823^{+0.012}_{-0.011}$
$\tau$	0.0324	$< 0.0757$	$10^9 A_s e^{-2\tau}$	1.8943	$1.889^{+0.040}_{-0.044}$	$100\theta_{\text{s,eq}}$	0.4531	$0.4539^{+0.0061}_{-0.0058}$
$\ln(10^{10} A_s)$	3.006	$3.018^{+0.065}_{-0.058}$	$D_{40}$	1243	$1239^{+63}_{-62}$	$r_{\text{drag}}/D_V(0.57)$	0.07190	$0.07200^{+0.00092}_{-0.00090}$
$n_s$	0.9657	$0.967^{+0.021}_{-0.022}$	$D_{220}$	5877	$5855^{+240}_{-240}$	$H(0.57)$	93.46	$93.4^{+1.1}_{-1.0}$
$y_{\text{cal}}$	0.99976	$0.9998^{+0.0049}_{-0.0048}$	$D_{810}$	2563	$2558^{+60}_{-63}$	$D_A(0.57)$	1376.6	$1376^{+23}_{-23}$
$A_{100}^{\text{dustEE}}$	0.0810	$0.081^{+0.012}_{-0.012}$	$D_{1420}$	827.2	$825^{+27}_{-28}$	$F_{\text{AP}}(0.57)$	0.67373	$0.6734^{+0.0044}_{-0.0043}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0478	$0.048^{+0.011}_{-0.011}$	$D_{2000}$	234.1	$233.5^{+9.5}_{-9.8}$	$f\sigma_8(0.57)$	0.4541	$0.456^{+0.019}_{-0.017}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.0996^{+0.063}_{-0.065}$	$n_{\text{s},0.002}$	0.9657	$0.967^{+0.021}_{-0.022}$	$\sigma_8(0.57)$	0.5861	$0.590^{+0.022}_{-0.019}$
$A_{143}^{\text{dustEE}}$	0.0989	$0.099^{+0.015}_{-0.014}$	$Y_{\text{P}}$	0.245680	$0.24564^{+0.00047}_{-0.00051}$	$\chi^2_{\text{lensing}}$	9.04	$10.0 (\nu: 1.0)$
$A_{143 \times 217}^{\text{dustEE}}$	0.222	$0.224^{+0.091}_{-0.091}$	$Y_{\text{P}}^{\text{BBN}}$	0.247007	$0.24696^{+0.00047}_{-0.00051}$	$\chi^2_{\text{plikEE}}$	751.8	$758.1 (\nu: 7.8)$
$A_{217}^{\text{dustEE}}$	0.649	$0.65^{+0.25}_{-0.25}$	$10^5 \text{D}/\text{H}$	2.473	$2.49^{+0.21}_{-0.20}$	$\chi^2_{\text{H070p6}}$	0.45	$0.49 (\nu: 0.1)$
$H_0$	68.37	$68.4^{+1.6}_{-1.5}$	Age/Gyr	13.751	$13.76^{+0.13}_{-0.12}$	$\chi^2_{\text{JLA}}$	706.553	$706.60 (\nu: 0.0)$
$\Omega_\Lambda$	0.6975	$0.699^{+0.017}_{-0.017}$	$z_*$	1088.93	$1089.0^{+1.5}_{-1.4}$	$\chi^2_{6\text{DF}}$	0.000	$0.051 (\nu: 0.0)$
$\Omega_{\text{m}}$	0.3025	$0.301^{+0.017}_{-0.017}$	$r_*$	144.52	$144.7^{+1.0}_{-0.91}$	$\chi^2_{\text{MGS}}$	1.68	$1.89 (\nu: 0.2)$
$\Omega_{\text{m}} h^2$	0.14139	$0.1410^{+0.0026}_{-0.0027}$	$100\theta_*$	1.04005	$1.0401^{+0.0015}_{-0.0015}$	$\chi^2_{\text{DR11CMass}}$	2.53	$3.12 (\nu: 0.4)$
$\Omega_{\text{m}} h^3$	0.09667	$0.0965^{+0.0021}_{-0.0023}$	$D_A/\text{Gpc}$	13.895	$13.91^{+0.10}_{-0.092}$	$\chi^2_{\text{DR11LOWZ}}$	0.29	$0.38 (\nu: 0.1)$
$\sigma_8$	0.7850	$0.790^{+0.030}_{-0.027}$	$z_{\text{drag}}$	1061.27	$1061.1^{+2.5}_{-2.6}$	$\chi^2_{\text{prior}}$	3.6	$7.9 (\nu: 5.9)$
$\sigma_8 \Omega_{\text{m}}^{0.5}$	0.4317	$0.433^{+0.023}_{-0.021}$	$r_{\text{drag}}$	146.97	$147.1^{+1.3}_{-1.3}$	$\chi^2_{\text{CMB}}$	760.9	$768.1 (\nu: 8.5)$
$\sigma_8 \Omega_{\text{m}}^{0.25}$	0.5822	$0.585^{+0.025}_{-0.024}$	$k_{\text{D}}$	0.14147	$0.1412^{+0.0021}_{-0.0021}$	$\chi^2_{\text{BAO}}$	4.50	$5.4 (\nu: 0.9)$
$\sigma_8/h^{0.5}$	0.9494	$0.955^{+0.041}_{-0.038}$	$100\theta_{\text{D}}$	0.15981	$0.1600^{+0.0015}_{-0.0014}$			

Best-fit  $\chi^2_{\text{eff}} = 1475.97$ ;  $\bar{\chi}^2_{\text{eff}} = 1488.50$ ;  $R - 1 = 0.01677$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.68 DR11CMass: 2.53 DR11LOWZ: 0.29 CMB - smica\_g30\_ftl\_full\_pp: 9.04 plik\_dx11dr2\_HM\_v18\_EE: 751.82 Hubble - H070p6: 0.45 SN  
- JLA December\_2013: 706.55

## 2.108 base\_CamSpecHM\_TE.lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02240	$0.02240^{+0.00052}_{-0.00050}$ (+0.4 $\sigma$ )	$\sigma_8/h^{0.5}$	0.9888	$0.988^{+0.030}_{-0.030}$ (+0.4 $\sigma$ )	$r_{\text{drag}}$	148.03	$148.01^{+0.98}_{-0.99}$ (+0.9 $\sigma$ )
$\Omega_c h^2$	0.11634	$0.1164^{+0.0043}_{-0.0042}$ (-0.9 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.429	$2.427^{+0.075}_{-0.079}$ (-0.3 $\sigma$ )	$k_D$	0.13992	$0.1399^{+0.0011}_{-0.0011}$ (-0.7 $\sigma$ )
$100\theta_{\text{MC}}$	1.04130	$1.04127^{+0.00093}_{-0.00099}$ (+0.6 $\sigma$ )	$z_{\text{re}}$	10.34	$10.0^{+4.2}_{-4.6}$ (+0.8 $\sigma$ )	$100\theta_D$	0.16087	$0.16087^{+0.00062}_{-0.00060}$ (-0.1 $\sigma$ )
$\tau$	0.0834	$0.081^{+0.048}_{-0.049}$ (+0.9 $\sigma$ )	$10^9 A_s$	2.189	$2.18^{+0.18}_{-0.18}$ (+0.8 $\sigma$ )	$z_{\text{eq}}$	3316	$3318^{+98}_{-95}$ (-0.9 $\sigma$ )
$\ln(10^{10} A_s)$	3.086	$3.083^{+0.081}_{-0.083}$ (+0.8 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.8527	$1.854^{+0.046}_{-0.045}$ (-0.7 $\sigma$ )	$100\theta_{\text{eq}}$	0.8295	$0.829^{+0.019}_{-0.019}$ (+0.9 $\sigma$ )
$n_s$	0.9794	$0.979^{+0.023}_{-0.024}$ (+1.1 $\sigma$ )	$D_{40}$	1197	$1199^{+53}_{-50}$ (-1.0 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07259	$0.0726^{+0.0015}_{-0.0015}$ (+1.0 $\sigma$ )
$y_{\text{cal}}$	1.00003	$1.0001^{+0.0049}_{-0.0047}$ (+0.0 $\sigma$ )	$D_{220}$	5656	$5659^{+160}_{-150}$ (-0.8 $\sigma$ )	$H(0.57)$	93.48	$93.47^{+0.92}_{-0.88}$ (+0.8 $\sigma$ )
$c_{TE}$	1.0001	$1.000^{+0.019}_{-0.019}$	$D_{810}$	2519	$2520^{+62}_{-61}$ (-0.0 $\sigma$ )	$D_A(0.57)$	1372.0	$1373^{+26}_{-26}$ (-0.9 $\sigma$ )
$H_0$	68.81	$68.8^{+2.0}_{-1.9}$ (+0.9 $\sigma$ )	$D_{1420}$	815.0	$815^{+25}_{-24}$ (+0.4 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6716	$0.6718^{+0.0066}_{-0.0064}$ (-0.9 $\sigma$ )
$\Omega_\Lambda$	0.7056	$0.705^{+0.024}_{-0.026}$ (+0.9 $\sigma$ )	$n_{s,0.002}$	0.9794	$0.979^{+0.023}_{-0.024}$ (+1.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4723	$0.472^{+0.014}_{-0.015}$ (+0.4 $\sigma$ )
$\Omega_m$	0.2944	$0.295^{+0.026}_{-0.024}$ (-0.9 $\sigma$ )	$Y_P$	0.244986	$0.24499^{+0.00022}_{-0.00021}$ (-3.1 $\sigma$ )	$\sigma_8(0.57)$	0.6144	$0.614^{+0.024}_{-0.024}$ (+0.9 $\sigma$ )
$\Omega_m h^2$	0.13939	$0.1395^{+0.0041}_{-0.0040}$ (-0.9 $\sigma$ )	Age/Gyr	13.767	$13.768^{+0.081}_{-0.081}$ (-0.7 $\sigma$ )	$Y_P^{\text{BBN}}$	0.246318	$0.24631^{+0.00022}_{-0.00022}$ (-3.1 $\sigma$ )
$\Omega_m h^3$	0.09592	$0.09591^{+0.00096}_{-0.00096}$ (-0.1 $\sigma$ )	$z_*$	1089.54	$1089.56^{+0.90}_{-0.89}$ (-0.7 $\sigma$ )	$\chi^2_{\text{lensing}}$	8.60	9.6 ( $\nu$ : 0.9) (-0.1 $\sigma$ )
$\sigma_8$	0.8202	$0.819^{+0.028}_{-0.028}$ (+0.8 $\sigma$ )	$r_*$	145.36	$145.34^{+0.97}_{-0.99}$ (+0.9 $\sigma$ )	$\chi^2_{\text{CamSpec}}$	2694.5	2699.4 ( $\nu$ : 4.8)
$\sigma_8 \Omega_m^{0.5}$	0.4450	$0.445^{+0.018}_{-0.018}$ (-0.4 $\sigma$ )	$100\theta_*$	1.04149	$1.04146^{+0.00091}_{-0.00098}$ (+0.6 $\sigma$ )	$\chi^2_{\text{prior}}$	10.03	12.0 ( $\nu$ : 1.9) (+1.2 $\sigma$ )
$\sigma_8 \Omega_m^{0.25}$	0.6041	$0.604^{+0.019}_{-0.019}$ (+0.1 $\sigma$ )	$z_{\text{drag}}$	1059.74	$1059.7^{+1.0}_{-1.1}$ (+0.1 $\sigma$ )	$\chi^2_{\text{CMB}}$	2703.1	2709.0 ( $\nu$ : 6.0) (+418.3 $\sigma$ )

Best-fit  $\chi^2_{\text{eff}} = 2713.09$ ;  $\Delta\chi^2_{\text{eff}} = 1771.23$ ;  $\bar{\chi}^2_{\text{eff}} = 2721.01$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 1765.13$ ;  $R - 1 = 0.00694$   
 $\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 8.60 ( $\Delta$  -0.11) CamSpec like\_v9.10CMH\_unified: 2694.46

## 2.109 base\_CamSpecHM\_TE\_lensing\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00045}_{-0.00045} \quad (-0.0\sigma)$	$z_{\text{re}}$	$9.1^{+3.7}_{-4.1} \quad (+0.5\sigma)$	$100\theta_{\text{eq}}$	$0.823^{+0.011}_{-0.011} \quad (+0.5\sigma)$
$\Omega_c h^2$	$0.1179^{+0.0026}_{-0.0025} \quad (-0.5\sigma)$	$10^9 A_s$	$2.14^{+0.14}_{-0.14} \quad (+0.4\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07203^{+0.00086}_{-0.00084} \quad (+0.5\sigma)$
$100\theta_{\text{MC}}$	$1.04109^{+0.00088}_{-0.00090} \quad (+0.3\sigma)$	$10^9 A_s e^{-2\tau}$	$1.859^{+0.045}_{-0.044} \quad (-0.4\sigma)$	$H(0.57)$	$93.17^{+0.57}_{-0.58} \quad (+0.4\sigma)$
$\tau$	$0.070^{+0.038}_{-0.041} \quad (+0.5\sigma)$	$D_{40}$	$1205^{+52}_{-49} \quad (-0.8\sigma)$	$D_A(0.57)$	$1382^{+16}_{-16} \quad (-0.4\sigma)$
$\ln(10^{10} A_s)$	$3.063^{+0.063}_{-0.066} \quad (+0.4\sigma)$	$D_{220}$	$5658^{+160}_{-160} \quad (-0.8\sigma)$	$F_{\text{AP}}(0.57)$	$0.6741^{+0.0038}_{-0.0038} \quad (-0.5\sigma)$
$n_s$	$0.974^{+0.020}_{-0.020} \quad (+0.8\sigma)$	$D_{810}$	$2520^{+62}_{-62} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.472^{+0.014}_{-0.014} \quad (+0.4\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0048}_{-0.0047} \quad (+0.0\sigma)$	$D_{1420}$	$813^{+25}_{-24} \quad (+0.3\sigma)$	$\sigma_8(0.57)$	$0.608^{+0.020}_{-0.021} \quad (+0.6\sigma)$
$c_{TE}$	$1.001^{+0.019}_{-0.019}$	$n_{s,0.002}$	$0.974^{+0.020}_{-0.020} \quad (+0.8\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24627^{+0.00019}_{-0.00020} \quad (-4.0\sigma)$
$H_0$	$68.1^{+1.1}_{-1.1} \quad (+0.5\sigma)$	$Y_{\text{P}}$	$0.24494^{+0.00019}_{-0.00019} \quad (-4.0\sigma)$	$\chi^2_{\text{lensing}}$	$9.7 \quad (\nu: 0.9) \quad (-0.0\sigma)$
$\Omega_\Lambda$	$0.696^{+0.015}_{-0.015} \quad (+0.5\sigma)$	Age/Gyr	$13.791^{+0.062}_{-0.060} \quad (-0.2\sigma)$	$\chi^2_{\text{CamSpec}}$	$2699.2 \quad (\nu: 4.5)$
$\Omega_m$	$0.304^{+0.015}_{-0.015} \quad (-0.5\sigma)$	$z_*$	$1089.82^{+0.67}_{-0.65} \quad (-0.2\sigma)$	$\chi^2_{6\text{DF}}$	$0.043 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$\Omega_m h^2$	$0.1409^{+0.0024}_{-0.0024} \quad (-0.5\sigma)$	$r_*$	$145.03^{+0.66}_{-0.67} \quad (+0.5\sigma)$	$\chi^2_{\text{MGS}}$	$1.84 \quad (\nu: 0.2) \quad (+0.5\sigma)$
$\Omega_m h^3$	$0.09590^{+0.00098}_{-0.00097} \quad (-0.1\sigma)$	$100\theta_*$	$1.04129^{+0.00087}_{-0.00090} \quad (+0.4\sigma)$	$\chi^2_{\text{DR11CMass}}$	$2.99 \quad (\nu: 0.3) \quad (+0.2\sigma)$
$\sigma_8$	$0.815^{+0.025}_{-0.026} \quad (+0.5\sigma)$	$z_{\text{drag}}$	$1059.6^{+1.0}_{-0.98} \quad (-0.1\sigma)$	$\chi^2_{\text{DR11LOWZ}}$	$0.36 \quad (\nu: 0.1) \quad (-0.4\sigma)$
$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.015}_{-0.016} \quad (+0.1\sigma)$	$r_{\text{drag}}$	$147.73^{+0.72}_{-0.74} \quad (+0.5\sigma)$	$\chi^2_{\text{prior}}$	$12.0 \quad (\nu: 1.8) \quad (+1.1\sigma)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.018}_{-0.018} \quad (+0.3\sigma)$	$k_{\text{D}}$	$0.14015^{+0.00098}_{-0.00095} \quad (-0.4\sigma)$	$\chi^2_{\text{CMB}}$	$2708.9 \quad (\nu: 5.7) \quad (+440.2\sigma)$
$\sigma_8/h^{0.5}$	$0.988^{+0.030}_{-0.030} \quad (+0.4\sigma)$	$100\theta_{\text{D}}$	$0.16094^{+0.00061}_{-0.00059} \quad (+0.1\sigma)$	$\chi^2_{\text{BAO}}$	$5.2 \quad (\nu: 0.8) \quad (+0.2\sigma)$
$\langle d^2 \rangle^{1/2}$	$2.429^{+0.074}_{-0.080} \quad (-0.2\sigma)$	$z_{\text{eq}}$	$3351^{+58}_{-58} \quad (-0.5\sigma)$		

$$\bar{\chi}^2_{\text{eff}} = 2726.13; \Delta\bar{\chi}^2_{\text{eff}} = 1765.90; R - 1 = 0.01181$$

## 2.110 base\_CamSpecHM\_TE\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00044}_{-0.00044} \quad (-0.1\sigma)$	$10^9 A_s$	$2.15^{+0.14}_{-0.14} \quad (+0.4\sigma)$	$H(0.57)$	$93.22^{+0.56}_{-0.56} \quad (+0.3\sigma)$
$\Omega_c h^2$	$0.1177^{+0.0024}_{-0.0024} \quad (-0.5\sigma)$	$10^9 A_s e^{-2\tau}$	$1.859^{+0.045}_{-0.043} \quad (-0.4\sigma)$	$D_A(0.57)$	$1380^{+15}_{-15} \quad (-0.4\sigma)$
$100\theta_{MC}$	$1.04112^{+0.00088}_{-0.00090} \quad (+0.3\sigma)$	$D_{40}$	$1204^{+51}_{-49} \quad (-0.8\sigma)$	$F_{AP}(0.57)$	$0.6737^{+0.0036}_{-0.0036} \quad (-0.5\sigma)$
$\tau$	$0.072^{+0.038}_{-0.041} \quad (+0.5\sigma)$	$D_{220}$	$5659^{+160}_{-160} \quad (-0.9\sigma)$	$f\sigma_8(0.57)$	$0.472^{+0.014}_{-0.014} \quad (+0.4\sigma)$
$\ln(10^{10} A_s)$	$3.066^{+0.062}_{-0.066} \quad (+0.4\sigma)$	$D_{810}$	$2520^{+62}_{-62} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.609^{+0.020}_{-0.021} \quad (+0.6\sigma)$
$n_s$	$0.975^{+0.020}_{-0.020} \quad (+0.8\sigma)$	$D_{1420}$	$814^{+25}_{-24} \quad (+0.3\sigma)$	$Y_P^{BBN}$	$0.24628^{+0.00018}_{-0.00019} \quad (-4.1\sigma)$
$y_{cal}$	$1.0001^{+0.0048}_{-0.0047} \quad (+0.0\sigma)$	$n_{s,0.002}$	$0.975^{+0.020}_{-0.020} \quad (+0.8\sigma)$	$\chi^2_{lensing}$	$9.7 \quad (\nu: 0.9) \quad (-0.0\sigma)$
$c_{TE}$	$1.001^{+0.019}_{-0.019}$	$Y_P$	$0.24495^{+0.00019}_{-0.00018} \quad (-4.1\sigma)$	$\chi^2_{CamSpec}$	$2699.1 \quad (\nu: 4.4)$
$H_0$	$68.2^{+1.1}_{-1.1} \quad (+0.5\sigma)$	Age/Gyr	$13.787^{+0.061}_{-0.058} \quad (-0.2\sigma)$	$\chi^2_{H070p6}$	$0.56 \quad (\nu: 0.0) \quad (-0.4\sigma)$
$\Omega_\Lambda$	$0.697^{+0.014}_{-0.014} \quad (+0.5\sigma)$	$z_*$	$1089.77^{+0.66}_{-0.63} \quad (-0.2\sigma)$	$\chi^2_{JLA}$	$706.60 \quad (\nu: 0.0) \quad (-0.4\sigma)$
$\Omega_m$	$0.303^{+0.014}_{-0.014} \quad (-0.5\sigma)$	$r_*$	$145.07^{+0.64}_{-0.67} \quad (+0.5\sigma)$	$\chi^2_{6DF}$	$0.043 \quad (\nu: 0.0) \quad (+0.0\sigma)$
$\Omega_m h^2$	$0.1407^{+0.0024}_{-0.0024} \quad (-0.5\sigma)$	$100\theta_*$	$1.04132^{+0.00087}_{-0.00089} \quad (+0.4\sigma)$	$\chi^2_{MGS}$	$1.95 \quad (\nu: 0.2) \quad (+0.5\sigma)$
$\Omega_m h^3$	$0.09592^{+0.00097}_{-0.00098} \quad (-0.1\sigma)$	$z_{drag}$	$1059.63^{+0.99}_{-0.99} \quad (-0.2\sigma)$	$\chi^2_{DR11CMass}$	$3.06 \quad (\nu: 0.4) \quad (+0.3\sigma)$
$\sigma_8$	$0.816^{+0.025}_{-0.026} \quad (+0.5\sigma)$	$r_{drag}$	$147.76^{+0.71}_{-0.75} \quad (+0.5\sigma)$	$\chi^2_{DR11LOWZ}$	$0.29 \quad (\nu: 0.1) \quad (-0.4\sigma)$
$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.015}_{-0.016} \quad (+0.1\sigma)$	$k_D$	$0.14013^{+0.00098}_{-0.00094} \quad (-0.4\sigma)$	$\chi^2_{prior}$	$12.0 \quad (\nu: 1.8) \quad (+1.1\sigma)$
$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.018}_{-0.019} \quad (+0.3\sigma)$	$100\theta_D$	$0.16092^{+0.00060}_{-0.00059} \quad (+0.1\sigma)$	$\chi^2_{CMB}$	$2708.8 \quad (\nu: 5.6) \quad (+440.9\sigma)$
$\sigma_8/h^{0.5}$	$0.988^{+0.030}_{-0.030} \quad (+0.4\sigma)$	$z_{eq}$	$3346^{+58}_{-56} \quad (-0.5\sigma)$	$\chi^2_{BAO}$	$5.3 \quad (\nu: 0.9) \quad (+0.3\sigma)$
$\langle d^2 \rangle^{1/2}$	$2.429^{+0.074}_{-0.081} \quad (-0.2\sigma)$	$100\theta_{eq}$	$0.824^{+0.011}_{-0.011} \quad (+0.5\sigma)$		
$z_{re}$	$9.2^{+3.7}_{-4.0} \quad (+0.5\sigma)$	$r_{drag}/D_V(0.57)$	$0.07211^{+0.00083}_{-0.00082} \quad (+0.5\sigma)$		

$$\bar{\chi}^2_{eff} = 3433.23; \Delta\bar{\chi}^2_{eff} = 1765.68; R - 1 = 0.01156$$

## 2.111 base\_CamSpecHM\_EE\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02347	$0.0236^{+0.0018}_{-0.0016}$ (+0.1 $\sigma$ )	$\sigma_8/h^{0.5}$	0.941	$0.945^{+0.048}_{-0.051}$ (+0.1 $\sigma$ )	$r_{\text{drag}}$	146.40	$146.5^{+1.1}_{-1.1}$ (−1.0 $\sigma$ )
$\Omega_c h^2$	0.1180	$0.1170^{+0.0064}_{-0.0066}$ (+0.5 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.371	$2.382^{+0.099}_{-0.10}$ (+0.3 $\sigma$ )	$k_D$	0.14241	$0.1423^{+0.0019}_{-0.0020}$ (+0.7 $\sigma$ )
$100\theta_{\text{MC}}$	1.03981	$1.0400^{+0.0014}_{-0.0014}$ (−0.3 $\sigma$ )	$z_{\text{re}}$	4.52	< 9.87 (−0.3 $\sigma$ )	$100\theta_D$	0.15919	$0.1591^{+0.0019}_{-0.0018}$ (−0.3 $\sigma$ )
$\tau$	0.0277	< 0.0831 (−0.3 $\sigma$ )	$10^9 A_s$	2.003	$2.05^{+0.16}_{-0.14}$ (−0.4 $\sigma$ )	$z_{\text{eq}}$	3381	$3361^{+120}_{-130}$ (+0.7 $\sigma$ )
$\ln(10^{10} A_s)$	2.997	$3.021^{+0.078}_{-0.066}$ (−0.4 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.8953	$1.887^{+0.044}_{-0.047}$ (−0.1 $\sigma$ )	$100\theta_{\text{eq}}$	0.8194	$0.824^{+0.028}_{-0.026}$ (−0.6 $\sigma$ )
$n_s$	0.9616	$0.965^{+0.023}_{-0.022}$ (−0.6 $\sigma$ )	$D_{40}$	1256.4	$1250^{+49}_{-49}$ (+0.5 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07185	$0.0722^{+0.0025}_{-0.0023}$ (−0.5 $\sigma$ )
$y_{\text{cal}}$	1.0000	$0.9999^{+0.0052}_{-0.0050}$ (+0.0 $\sigma$ )	$D_{220}$	5936	$5927^{+310}_{-290}$ (+0.0 $\sigma$ )	$H(0.57)$	93.74	$94.0^{+2.2}_{-2.1}$ (−0.2 $\sigma$ )
$c_{EE}$	0.9986	$0.996^{+0.018}_{-0.018}$	$D_{810}$	2561	$2553^{+73}_{-72}$ (−0.4 $\sigma$ )	$D_A(0.57)$	1372	$1365^{+51}_{-54}$ (+0.3 $\sigma$ )
$H_0$	68.61	$69.1^{+4.0}_{-3.6}$ (−0.3 $\sigma$ )	$D_{1420}$	826.8	$825^{+32}_{-31}$ (−0.4 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6736	$0.672^{+0.011}_{-0.011}$ (+0.4 $\sigma$ )
$\Omega_\Lambda$	0.6981	$0.703^{+0.041}_{-0.044}$ (−0.4 $\sigma$ )	$n_{s,0.002}$	0.9616	$0.965^{+0.023}_{-0.022}$ (−0.6 $\sigma$ )	$f\sigma_8(0.57)$	0.4507	$0.452^{+0.022}_{-0.024}$ (+0.1 $\sigma$ )
$\Omega_m$	0.3019	$0.297^{+0.044}_{-0.041}$ (+0.4 $\sigma$ )	$Y_P$	0.24544	$0.24548^{+0.00071}_{-0.00067}$ (−0.9 $\sigma$ )	$\sigma_8(0.57)$	0.5820	$0.588^{+0.022}_{-0.019}$ (−0.4 $\sigma$ )
$\Omega_m h^2$	0.1421	$0.1413^{+0.0051}_{-0.0053}$ (+0.7 $\sigma$ )	Age/Gyr	13.711	$13.69^{+0.20}_{-0.23}$ (+0.1 $\sigma$ )	$Y_P^{\text{BBN}}$	0.24676	$0.24681^{+0.00072}_{-0.00067}$ (−0.9 $\sigma$ )
$\Omega_m h^3$	0.09750	$0.0976^{+0.0027}_{-0.0025}$ (+0.3 $\sigma$ )	$z_*$	1088.41	$1088.2^{+2.4}_{-2.4}$ (+0.0 $\sigma$ )	$\chi^2_{\text{lensing}}$	9.35	10.7 ( $\nu$ : 1.4) (+0.1 $\sigma$ )
$\sigma_8$	0.7793	$0.785^{+0.030}_{-0.027}$ (−0.2 $\sigma$ )	$r_*$	144.11	$144.3^{+1.0}_{-0.94}$ (−1.1 $\sigma$ )	$\chi^2_{\text{CamSpec}}$	2186.1	2190.5 ( $\nu$ : 4.4)
$\sigma_8 \Omega_m^{0.5}$	0.4282	$0.427^{+0.039}_{-0.039}$ (+0.3 $\sigma$ )	$100\theta_*$	1.03989	$1.0400^{+0.0013}_{-0.0013}$ (−0.4 $\sigma$ )	$\chi^2_{\text{prior}}$	10.05	12.1 ( $\nu$ : 2.1) (+1.2 $\sigma$ )
$\sigma_8 \Omega_m^{0.25}$	0.5777	$0.579^{+0.033}_{-0.035}$ (+0.2 $\sigma$ )	$z_{\text{drag}}$	1062.30	$1062.5^{+3.6}_{-3.3}$ (+0.2 $\sigma$ )	$\chi^2_{\text{CMB}}$	2195.5	2201.1 ( $\nu$ : 5.7) (+325.0 $\sigma$ )

Best-fit  $\chi^2_{\text{eff}} = 2205.52$ ;  $\Delta\chi^2_{\text{eff}} = 1441.21$ ;  $\bar{\chi}^2_{\text{eff}} = 2213.18$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 1436.26$ ;  $R - 1 = 0.00705$   
 $\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.35 ( $\Delta$  0.22) CamSpec like\_v9.10CMH\_unified: 2186.12



## 2.112 base\_CamSpecHM\_EE\_lensing\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.0233^{+0.0010}_{-0.0010} \quad (+0.8\sigma)$	$z_{\text{re}}$	$< 9.14 \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.819^{+0.012}_{-0.011} \quad (-0.4\sigma)$
$\Omega_c h^2$	$0.1181^{+0.0027}_{-0.0028} \quad (+0.3\sigma)$	$10^9 A_s$	$2.04^{+0.13}_{-0.11} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07182^{+0.00094}_{-0.00092} \quad (-0.2\sigma)$
$100\theta_{\text{MC}}$	$1.0399^{+0.0012}_{-0.0012} \quad (-0.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.887^{+0.042}_{-0.046} \quad (-0.1\sigma)$	$H(0.57)$	$93.7^{+1.0}_{-1.0} \quad (+0.6\sigma)$
$\tau$	$< 0.0716 \quad (-0.1\sigma)$	$D_{40}$	$1251^{+49}_{-50} \quad (+0.4\sigma)$	$D_A(0.57)$	$1374^{+22}_{-23} \quad (-0.4\sigma)$
$\ln(10^{10} A_s)$	$3.014^{+0.061}_{-0.055} \quad (-0.1\sigma)$	$D_{220}$	$5891^{+210}_{-220} \quad (+0.4\sigma)$	$F_{\text{AP}}(0.57)$	$0.6739^{+0.0045}_{-0.0044} \quad (-0.0\sigma)$
$n_s$	$0.962^{+0.018}_{-0.017} \quad (-0.4\sigma)$	$D_{810}$	$2549^{+64}_{-65} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.455^{+0.017}_{-0.016} \quad (-0.2\sigma)$
$y_{\text{cal}}$	$0.9998^{+0.0053}_{-0.0047} \quad (-0.0\sigma)$	$D_{1420}$	$822^{+25}_{-26} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.587^{+0.020}_{-0.018} \quad (-0.3\sigma)$
$c_{EE}$	$0.997^{+0.017}_{-0.018}$	$n_{s,0.002}$	$0.962^{+0.018}_{-0.017} \quad (-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24670^{+0.00041}_{-0.00043} \quad (-0.8\sigma)$
$H_0$	$68.5^{+1.6}_{-1.5} \quad (+0.3\sigma)$	$Y_{\text{P}}$	$0.24538^{+0.00042}_{-0.00043} \quad (-0.8\sigma)$	$\chi^2_{\text{lensing}}$	$10.3 \quad (\nu: 1.1) \quad (+0.2\sigma)$
$\Omega_\Lambda$	$0.697^{+0.017}_{-0.018} \quad (+0.0\sigma)$	Age/Gyr	$13.72^{+0.11}_{-0.12} \quad (-0.7\sigma)$	$\chi^2_{\text{CamSpec}}$	$2190.1 \quad (\nu: 4.1)$
$\Omega_m$	$0.303^{+0.018}_{-0.017} \quad (-0.0\sigma)$	$z_*$	$1088.6^{+1.3}_{-1.3} \quad (-0.7\sigma)$	$\chi^2_{6\text{DF}}$	$0.052 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$\Omega_m h^2$	$0.1421^{+0.0025}_{-0.0026} \quad (+0.7\sigma)$	$r_*$	$144.18^{+0.86}_{-0.82} \quad (-1.0\sigma)$	$\chi^2_{\text{MGS}}$	$1.67 \quad (\nu: 0.2) \quad (-0.1\sigma)$
$\Omega_m h^3$	$0.0973^{+0.0019}_{-0.0020} \quad (+0.9\sigma)$	$100\theta_*$	$1.0400^{+0.0012}_{-0.0013} \quad (-0.1\sigma)$	$\chi^2_{\text{DR11CMass}}$	$3.07 \quad (\nu: 0.3) \quad (-0.0\sigma)$
$\sigma_8$	$0.787^{+0.027}_{-0.024} \quad (-0.3\sigma)$	$z_{\text{drag}}$	$1062.0^{+2.2}_{-2.3} \quad (+0.9\sigma)$	$\chi^2_{\text{DR11LOWZ}}$	$0.53 \quad (\nu: 0.2) \quad (+0.1\sigma)$
$\sigma_8 \Omega_m^{0.5}$	$0.433^{+0.021}_{-0.021} \quad (-0.2\sigma)$	$r_{\text{drag}}$	$146.5^{+1.1}_{-1.1} \quad (-1.0\sigma)$	$\chi^2_{\text{prior}}$	$12.0 \quad (\nu: 1.9) \quad (+1.2\sigma)$
$\sigma_8 \Omega_m^{0.25}$	$0.584^{+0.023}_{-0.022} \quad (-0.2\sigma)$	$k_{\text{D}}$	$0.1422^{+0.0017}_{-0.0018} \quad (+1.0\sigma)$	$\chi^2_{\text{CMB}}$	$2200.4 \quad (\nu: 4.8) \quad (+345.8\sigma)$
$\sigma_8/h^{0.5}$	$0.951^{+0.037}_{-0.035} \quad (-0.3\sigma)$	$100\theta_{\text{D}}$	$0.1594^{+0.0013}_{-0.0012} \quad (-0.9\sigma)$	$\chi^2_{\text{BAO}}$	$5.3 \quad (\nu: 0.7) \quad (-0.0\sigma)$
$\langle d^2 \rangle^{1/2}$	$2.391^{+0.084}_{-0.078} \quad (+0.1\sigma)$	$z_{\text{eq}}$	$3380^{+59}_{-62} \quad (+0.7\sigma)$		

$$\bar{\chi}^2_{\text{eff}} = 2217.68; \Delta\bar{\chi}^2_{\text{eff}} = 1436.17; R - 1 = 0.00885$$

### 2.113 base\_CamSpecHM\_EE\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02342^{+0.00099}_{-0.0010} \quad (+0.8\sigma)$	$10^9 A_s$	$2.04^{+0.13}_{-0.11} \quad (-0.1\sigma)$	$H(0.57)$	$93.74^{+0.99}_{-0.94} \quad (+0.6\sigma)$
$\Omega_c h^2$	$0.1179^{+0.0025}_{-0.0026} \quad (+0.3\sigma)$	$10^9 A_s e^{-2\tau}$	$1.887^{+0.042}_{-0.045} \quad (-0.1\sigma)$	$D_A(0.57)$	$1372^{+21}_{-22} \quad (-0.4\sigma)$
$100\theta_{MC}$	$1.0399^{+0.0012}_{-0.0013} \quad (-0.1\sigma)$	$D_{40}$	$1251^{+48}_{-50} \quad (+0.4\sigma)$	$F_{AP}(0.57)$	$0.6734^{+0.0042}_{-0.0042} \quad (+0.0\sigma)$
$\tau$	$< 0.0718 \quad (-0.1\sigma)$	$D_{220}$	$5903^{+200}_{-220} \quad (+0.4\sigma)$	$f\sigma_8(0.57)$	$0.455^{+0.017}_{-0.016} \quad (-0.2\sigma)$
$\ln(10^{10} A_s)$	$3.014^{+0.061}_{-0.055} \quad (-0.1\sigma)$	$D_{810}$	$2551^{+64}_{-64} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.587^{+0.020}_{-0.018} \quad (-0.2\sigma)$
$n_s$	$0.963^{+0.018}_{-0.017} \quad (-0.4\sigma)$	$D_{1420}$	$823^{+25}_{-26} \quad (-0.1\sigma)$	$Y_P^{BBN}$	$0.24674^{+0.00040}_{-0.00042} \quad (-0.9\sigma)$
$y_{cal}$	$0.9998^{+0.0053}_{-0.0047} \quad (-0.0\sigma)$	$n_{s,0.002}$	$0.963^{+0.018}_{-0.017} \quad (-0.4\sigma)$	$\chi^2_{lensing}$	$10.3 \quad (\nu: 1.1) \quad (+0.2\sigma)$
$c_{EE}$	$0.997^{+0.017}_{-0.018}$	$Y_P$	$0.24541^{+0.00040}_{-0.00043} \quad (-0.9\sigma)$	$\chi^2_{CamSpec}$	$2190.0 \quad (\nu: 4.0)$
$H_0$	$68.6^{+1.5}_{-1.4} \quad (+0.3\sigma)$	Age/Gyr	$13.71^{+0.11}_{-0.11} \quad (-0.7\sigma)$	$\chi^2_{H070p6}$	$0.40 \quad (\nu: 0.0) \quad (-0.3\sigma)$
$\Omega_\Lambda$	$0.699^{+0.016}_{-0.016} \quad (-0.0\sigma)$	$z_*$	$1088.5^{+1.3}_{-1.2} \quad (-0.7\sigma)$	$\chi^2_{JLA}$	$706.60 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$\Omega_m$	$0.301^{+0.016}_{-0.016} \quad (+0.0\sigma)$	$r_*$	$144.18^{+0.86}_{-0.82} \quad (-1.0\sigma)$	$\chi^2_{6DF}$	$0.046 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$\Omega_m h^2$	$0.1420^{+0.0024}_{-0.0025} \quad (+0.7\sigma)$	$100\theta_*$	$1.0400^{+0.0012}_{-0.0013} \quad (-0.1\sigma)$	$\chi^2_{MGS}$	$1.79 \quad (\nu: 0.2) \quad (-0.1\sigma)$
$\Omega_m h^3$	$0.0974^{+0.0019}_{-0.0020} \quad (+0.8\sigma)$	$z_{drag}$	$1062.2^{+2.1}_{-2.3} \quad (+0.9\sigma)$	$\chi^2_{DR11CMass}$	$3.06 \quad (\nu: 0.3) \quad (-0.1\sigma)$
$\sigma_8$	$0.786^{+0.027}_{-0.024} \quad (-0.2\sigma)$	$r_{drag}$	$146.5^{+1.1}_{-1.0} \quad (-1.0\sigma)$	$\chi^2_{DR11LOWZ}$	$0.43 \quad (\nu: 0.1) \quad (+0.1\sigma)$
$\sigma_8 \Omega_m^{0.5}$	$0.432^{+0.021}_{-0.019} \quad (-0.2\sigma)$	$k_D$	$0.1423^{+0.0017}_{-0.0018} \quad (+1.0\sigma)$	$\chi^2_{prior}$	$12.0 \quad (\nu: 2.0) \quad (+1.2\sigma)$
$\sigma_8 \Omega_m^{0.25}$	$0.583^{+0.022}_{-0.022} \quad (-0.2\sigma)$	$100\theta_D$	$0.1593^{+0.0013}_{-0.0012} \quad (-0.9\sigma)$	$\chi^2_{CMB}$	$2200.3 \quad (\nu: 4.7) \quad (+347.3\sigma)$
$\sigma_8/h^{0.5}$	$0.949^{+0.036}_{-0.034} \quad (-0.3\sigma)$	$z_{eq}$	$3377^{+57}_{-60} \quad (+0.7\sigma)$	$\chi^2_{BAO}$	$5.3 \quad (\nu: 0.7) \quad (-0.1\sigma)$
$\langle d^2 \rangle^{1/2}$	$2.388^{+0.084}_{-0.078} \quad (+0.1\sigma)$	$100\theta_{eq}$	$0.820^{+0.011}_{-0.010} \quad (-0.5\sigma)$		
$z_{re}$	$< 9.15 \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.07191^{+0.00090}_{-0.00086} \quad (-0.2\sigma)$		

$$\bar{\chi}^2_{eff} = 2924.64; \Delta\bar{\chi}^2_{eff} = 1436.14; R - 1 = 0.00777$$

## 2.114 base\_plikHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022277	$0.02226^{+0.00046}_{-0.00044}$	$\Omega_m h^2$	0.14135	$0.1415^{+0.0037}_{-0.0036}$	$z_{\text{drag}}$	1059.59	$1059.57^{+0.94}_{-0.89}$
$\Omega_c h^2$	0.11843	$0.1186^{+0.0039}_{-0.0039}$	$\Omega_m h^3$	0.09593	$0.09591^{+0.00089}_{-0.00085}$	$r_{\text{drag}}$	147.61	$147.60^{+0.85}_{-0.86}$
$100\theta_{\text{MC}}$	1.04103	$1.04103^{+0.00091}_{-0.00090}$	$\sigma_8$	0.8152	$0.815^{+0.018}_{-0.018}$	$k_D$	0.14025	$0.14024^{+0.00094}_{-0.00092}$
$\tau$	0.0666	$0.066^{+0.033}_{-0.032}$	$\sigma_8 \Omega_m^{0.5}$	0.4516	$0.452^{+0.017}_{-0.017}$	$100\theta_D$	0.16095	$0.16098^{+0.00052}_{-0.00052}$
$\ln(10^{10} A_s)$	3.064	$3.062^{+0.059}_{-0.058}$	$\sigma_8 \Omega_m^{0.25}$	0.6068	$0.607^{+0.015}_{-0.015}$	$z_{\text{eq}}$	3362	$3365^{+88}_{-87}$
$n_s$	0.9683	$0.968^{+0.012}_{-0.011}$	$\sigma_8/h^{0.5}$	0.9896	$0.990^{+0.021}_{-0.022}$	$k_{\text{eq}}$	0.010263	$0.01027^{+0.00027}_{-0.00026}$
$y_{\text{cal}}$	1.00012	$1.0001^{+0.0049}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.447	$2.448^{+0.049}_{-0.051}$	$100\theta_{\text{eq}}$	0.8203	$0.820^{+0.017}_{-0.017}$
$A_{217}^{\text{CIB}}$	67.4	$65^{+10}_{-10}$	$z_{\text{re}}$	8.89	$8.7^{+3.1}_{-3.1}$	$100\theta_{s,\text{eq}}$	0.4531	$0.4529^{+0.0087}_{-0.0085}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.141	$2.14^{+0.13}_{-0.12}$	$r_{\text{drag}}/D_V(0.57)$	0.07185	$0.0718^{+0.0014}_{-0.0013}$
$A_{143}^{\text{tSZ}}$	7.21	$5.0^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8734	$1.874^{+0.025}_{-0.025}$	$H(0.57)$	93.08	$93.07^{+0.84}_{-0.77}$
$A_{100}^{\text{PS}}$	254	$260^{+50}_{-50}$	$D_{40}$	1224.6	$1226^{+25}_{-25}$	$D_A(0.57)$	1384.4	$1385^{+24}_{-24}$
$A_{143}^{\text{PS}}$	39.2	$44^{+20}_{-20}$	$D_{220}$	5717	$5717^{+82}_{-80}$	$F_{\text{AP}}(0.57)$	0.6749	$0.6751^{+0.0062}_{-0.0060}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{810}$	2532.5	$2532^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4728	$0.473^{+0.010}_{-0.011}$
$A_{217}^{\text{PS}}$	97.3	$96^{+20}_{-20}$	$D_{1420}$	815.0	$815^{+10}_{-10}$	$\sigma_8(0.57)$	0.6076	$0.607^{+0.017}_{-0.016}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.22	$230.0^{+3.6}_{-3.7}$	$f_{2000}^{143}$	30.0	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.42	$7.4^{+3.6}_{-3.7}$	$n_{s,0.002}$	0.9683	$0.968^{+0.012}_{-0.011}$	$f_{2000}^{143 \times 217}$	32.58	$33^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.04	$9.1^{+3.6}_{-3.6}$	$Y_{\text{P}}$	0.245352	$0.24534^{+0.00021}_{-0.00020}$	$f_{2000}^{217}$	106.15	$106.3^{+3.9}_{-3.9}$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.2^{+8.1}_{-8.1}$	$Y_{\text{P}}^{\text{BBN}}$	0.246678	$0.24667^{+0.00021}_{-0.00020}$	$\chi^2_{\text{lensing}}$	9.18	$9.9 (\nu: 1.1)$
$A_{217}^{\text{dustTT}}$	81.8	$82^{+10}_{-10}$	$10^5 D/H$	2.609	$2.613^{+0.085}_{-0.087}$	$\chi^2_{\text{lowTEB}}$	10494.86	$10495.6 (\nu: 0.8)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.797	$13.799^{+0.074}_{-0.077}$	$\chi^2_{\text{plik}}$	766.3	$779.4 (\nu: 14.9)$
$c_{217}$	0.99597	$0.9960^{+0.0029}_{-0.0028}$	$z_*$	1089.90	$1089.94^{+0.81}_{-0.83}$	$\chi^2_{\text{prior}}$	2.1	$7.4 (\nu: 6.4)$
$H_0$	67.87	$67.8^{+1.8}_{-1.8}$	$r_*$	144.91	$144.89^{+0.86}_{-0.87}$	$\chi^2_{\text{CMB}}$	11270.4	$11284.9 (\nu: 15.0)$
$\Omega_\Lambda$	0.6931	$0.692^{+0.023}_{-0.024}$	$100\theta_*$	1.04122	$1.04122^{+0.00089}_{-0.00088}$			
$\Omega_m$	0.3069	$0.308^{+0.024}_{-0.023}$	$D_A/\text{Gpc}$	13.917	$13.916^{+0.080}_{-0.081}$			

Best-fit  $\chi^2_{\text{eff}} = 11272.43$ ;  $\bar{\chi}^2_{\text{eff}} = 11292.30$ ;  $R - 1 = 0.00803$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.18 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.86 plik\_dx11dr2\_HM\_v18.TT: 766.32

## 2.115 base\_plikHM\_TT\_lowTEB\_lensing\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022249	$0.02225^{+0.00040}_{-0.00039}$	$\Omega_m h^3$	0.09591	$0.09591^{+0.00087}_{-0.00085}$	$k_D$	0.14026	$0.14024^{+0.00083}_{-0.00082}$
$\Omega_c h^2$	0.11867	$0.1186^{+0.0024}_{-0.0024}$	$\sigma_8$	0.8153	$0.815^{+0.018}_{-0.017}$	$100\theta_D$	0.16098	$0.16099^{+0.00050}_{-0.00050}$
$100\theta_{MC}$	1.04101	$1.04103^{+0.00081}_{-0.00080}$	$\sigma_8 \Omega_m^{0.5}$	0.4527	$0.452^{+0.013}_{-0.013}$	$z_{eq}$	3367	$3366^{+55}_{-54}$
$\tau$	0.0654	$0.066^{+0.026}_{-0.025}$	$\sigma_8 \Omega_m^{0.25}$	0.6075	$0.607^{+0.014}_{-0.014}$	$k_{eq}$	0.010278	$0.01027^{+0.00017}_{-0.00016}$
$\ln(10^{10} A_s)$	3.0618	$3.062^{+0.048}_{-0.047}$	$\sigma_8/h^{0.5}$	0.9905	$0.990^{+0.021}_{-0.021}$	$100\theta_{eq}$	0.8193	$0.820^{+0.010}_{-0.010}$
$n_s$	0.9679	$0.9675^{+0.0087}_{-0.0089}$	$\langle d^2 \rangle^{1/2}$	2.4480	$2.448^{+0.048}_{-0.050}$	$100\theta_{s,eq}$	0.4526	$0.4528^{+0.0053}_{-0.0053}$
$y_{cal}$	1.00023	$1.0002^{+0.0049}_{-0.0048}$	$z_{re}$	8.78	$8.8^{+2.3}_{-2.5}$	$r_{drag}/D_V(0.57)$	0.07177	$0.07179^{+0.00083}_{-0.00081}$
$A_{217}^{CIB}$	67.6	$65^{+10}_{-10}$	$10^9 A_s$	2.136	$2.14^{+0.10}_{-0.099}$	$H(0.57)$	93.03	$93.05^{+0.55}_{-0.53}$
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8746	$1.874^{+0.023}_{-0.022}$	$D_A(0.57)$	1385.9	$1386^{+15}_{-15}$
$A_{143}^{tSZ}$	7.25	$5.0^{+3.8}_{-3.9}$	$D_{40}$	1225.0	$1227^{+23}_{-22}$	$F_{AP}(0.57)$	0.67524	$0.6751^{+0.0037}_{-0.0037}$
$A_{100}^{PS}$	253	$260^{+50}_{-50}$	$D_{220}$	5715	$5717^{+79}_{-77}$	$f\sigma_8(0.57)$	0.4732	$0.473^{+0.010}_{-0.010}$
$A_{143}^{PS}$	39.2	$44^{+20}_{-20}$	$D_{810}$	2533.1	$2532^{+27}_{-27}$	$\sigma_8(0.57)$	0.6073	$0.607^{+0.015}_{-0.014}$
$A_{143 \times 217}^{PS}$	33	$39^{+20}_{-20}$	$D_{1420}$	815.0	$814.5^{+9.9}_{-10}$	$f_{2000}^{143}$	30.0	$30^{+6}_{-5}$
$A_{217}^{PS}$	97.0	$96^{+20}_{-20}$	$D_{2000}$	230.18	$230.0^{+3.5}_{-3.5}$	$f_{2000}^{143 \times 217}$	32.68	$33^{+4}_{-4}$
$A^{kSZ}$	0.0	—	$n_{s,0.002}$	0.9679	$0.9675^{+0.0087}_{-0.0089}$	$f_{2000}^{217}$	106.22	$106.4^{+3.9}_{-3.9}$
$A_{100}^{dustTT}$	7.51	$7.5^{+3.7}_{-3.7}$	$Y_P$	0.245339	$0.24534^{+0.00018}_{-0.00018}$	$\chi^2_{lensing}$	9.24	$9.9 (\nu: 1.0)$
$A_{143}^{dustTT}$	9.06	$9.0^{+3.7}_{-3.6}$	$Y_P^{BBN}$	0.246666	$0.24666^{+0.00018}_{-0.00018}$	$\chi^2_{lowTEB}$	10494.86	$10495.4 (\nu: 0.6)$
$A_{143 \times 217}^{dustTT}$	17.7	$17.2^{+8.3}_{-8.3}$	$10^5 D/H$	2.614	$2.614^{+0.075}_{-0.075}$	$\chi^2_{plik}$	766.2	$779.0 (\nu: 14.8)$
$A_{217}^{dustTT}$	82.0	$82^{+10}_{-10}$	Age/Gyr	13.801	$13.800^{+0.056}_{-0.057}$	$\chi^2_{6DF}$	0.010	$0.047 (\nu: 0.0)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1089.95	$1089.95^{+0.60}_{-0.60}$	$\chi^2_{MGS}$	1.41	$1.51 (\nu: 0.2)$
$c_{217}$	0.99598	$0.9960^{+0.0028}_{-0.0029}$	$r_*$	144.87	$144.89^{+0.59}_{-0.59}$	$\chi^2_{DR11CMAS}$	2.40	$2.83 (\nu: 0.2)$
$H_0$	67.75	$67.8^{+1.1}_{-1.1}$	$100\theta_*$	1.04121	$1.04122^{+0.00079}_{-0.00079}$	$\chi^2_{DR11LOWZ}$	0.48	$0.58 (\nu: 0.1)$
$\Omega_\Lambda$	0.6916	$0.692^{+0.014}_{-0.015}$	$D_A/Gpc$	13.914	$13.915^{+0.058}_{-0.058}$	$\chi^2_{prior}$	2.1	$7.4 (\nu: 6.4)$
$\Omega_m$	0.3084	$0.308^{+0.015}_{-0.014}$	$z_{drag}$	1059.55	$1059.55^{+0.88}_{-0.84}$	$\chi^2_{CMB}$	11270.3	$11284.3 (\nu: 14.6)$
$\Omega_m h^2$	0.14156	$0.1415^{+0.0023}_{-0.0023}$	$r_{drag}$	147.58	$147.60^{+0.64}_{-0.64}$	$\chi^2_{BAO}$	4.30	$4.97 (\nu: 0.4)$

Best-fit  $\chi^2_{eff} = 11276.74$ ;  $\bar{\chi}^2_{eff} = 11296.69$ ;  $R - 1 = 0.00978$

$\chi^2_{eff}$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMAS: 2.40 DR11LOWZ: 0.48 CMB - smica\_g30\_ftl\_full\_pp: 9.24 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.86 plik\_dx11dr2\_HM\_v18\_TT: 766.20

## 2.116 base\_plikHM\_TT\_lowTEB\_lensing\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022286	$0.02228^{+0.00045}_{-0.00043}$	$\Omega_m h^2$	0.14104	$0.1412^{+0.0034}_{-0.0034}$	$z_{\text{drag}}$	1059.59	$1059.60^{+0.92}_{-0.92}$
$\Omega_c h^2$	0.11811	$0.1183^{+0.0036}_{-0.0037}$	$\Omega_m h^3$	0.09592	$0.09592^{+0.00089}_{-0.00086}$	$r_{\text{drag}}$	147.69	$147.64^{+0.84}_{-0.82}$
$100\theta_{\text{MC}}$	1.04109	$1.04106^{+0.00089}_{-0.00088}$	$\sigma_8$	0.8170	$0.815^{+0.018}_{-0.018}$	$k_D$	0.14018	$0.14021^{+0.00091}_{-0.00089}$
$\tau$	0.0704	$0.067^{+0.032}_{-0.031}$	$\sigma_8 \Omega_m^{0.5}$	0.4511	$0.451^{+0.016}_{-0.017}$	$100\theta_D$	0.16096	$0.16097^{+0.00052}_{-0.00052}$
$\ln(10^{10} A_s)$	3.070	$3.065^{+0.057}_{-0.055}$	$\sigma_8 \Omega_m^{0.25}$	0.6071	$0.606^{+0.015}_{-0.015}$	$z_{\text{eq}}$	3355	$3360^{+80}_{-82}$
$n_s$	0.9689	$0.968^{+0.012}_{-0.011}$	$\sigma_8/h^{0.5}$	0.9907	$0.989^{+0.022}_{-0.022}$	$k_{\text{eq}}$	0.010240	$0.01025^{+0.00025}_{-0.00025}$
$y_{\text{cal}}$	0.99991	$1.0002^{+0.0049}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.450	$2.447^{+0.049}_{-0.051}$	$100\theta_{\text{eq}}$	0.8217	$0.821^{+0.016}_{-0.015}$
$A_{217}^{\text{CIB}}$	67.9	$64^{+10}_{-10}$	$z_{\text{re}}$	9.24	$8.9^{+2.8}_{-3.0}$	$100\theta_{s,\text{eq}}$	0.4538	$0.4534^{+0.0082}_{-0.0079}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.02	—	$10^9 A_s$	2.154	$2.14^{+0.13}_{-0.12}$	$r_{\text{drag}}/D_V(0.57)$	0.07196	$0.0719^{+0.0013}_{-0.0012}$
$A_{143}^{\text{tSZ}}$	6.82	$5.1^{+3.7}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8713	$1.873^{+0.025}_{-0.024}$	$H(0.57)$	93.14	$93.11^{+0.80}_{-0.74}$
$A_{100}^{\text{PS}}$	258	$260^{+60}_{-50}$	$D_{40}$	1224.3	$1226^{+24}_{-24}$	$D_A(0.57)$	1382.5	$1384^{+22}_{-23}$
$A_{143}^{\text{PS}}$	40.0	$44^{+20}_{-20}$	$D_{220}$	5716	$5719^{+82}_{-78}$	$F_{\text{AP}}(0.57)$	0.6744	$0.6747^{+0.0057}_{-0.0056}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$D_{810}$	2530.9	$2532^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4733	$0.473^{+0.010}_{-0.011}$
$A_{217}^{\text{PS}}$	95.8	$96^{+20}_{-20}$	$D_{1420}$	814.5	$814.7^{+9.9}_{-10}$	$\sigma_8(0.57)$	0.6094	$0.608^{+0.016}_{-0.016}$
$A^{\text{kSZ}}$	0.2	—	$D_{2000}$	230.14	$230.1^{+3.6}_{-3.6}$	$f_{2000}^{143}$	30.1	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.31	$7.5^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9689	$0.968^{+0.012}_{-0.011}$	$f_{2000}^{143 \times 217}$	32.42	$33^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.27	$9.0^{+3.7}_{-3.6}$	$Y_{\text{P}}$	0.245356	$0.24535^{+0.00020}_{-0.00020}$	$f_{2000}^{217}$	105.86	$106.2^{+3.9}_{-3.9}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.2^{+8.1}_{-8.2}$	$Y_{\text{P}}^{\text{BBN}}$	0.246682	$0.24668^{+0.00020}_{-0.00020}$	$\chi^2_{\text{lensing}}$	9.25	$9.8 (\nu: 1.0)$
$A_{217}^{\text{dustTT}}$	81.5	$82^{+10}_{-10}$	$10^5 D/H$	2.607	$2.609^{+0.084}_{-0.085}$	$\chi^2_{\text{lowTEB}}$	10494.98	$10495.5 (\nu: 0.8)$
$c_{100}$	0.99774	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.793	$13.795^{+0.071}_{-0.074}$	$\chi^2_{\text{plik}}$	766.2	$779.4 (\nu: 15.3)$
$c_{217}$	0.99586	$0.9960^{+0.0028}_{-0.0028}$	$z_*$	1089.86	$1089.89^{+0.78}_{-0.79}$	$\chi^2_{\text{JLA}}$	706.593	$706.73 (\nu: 0.0)$
$H_0$	68.01	$67.9^{+1.7}_{-1.6}$	$r_*$	144.99	$144.94^{+0.83}_{-0.81}$	$\chi^2_{\text{prior}}$	2.0	$7.4 (\nu: 6.3)$
$\Omega_\Lambda$	0.6951	$0.694^{+0.022}_{-0.022}$	$100\theta_*$	1.04129	$1.04126^{+0.00087}_{-0.00086}$	$\chi^2_{\text{CMB}}$	11270.5	$11284.8 (\nu: 14.9)$
$\Omega_m$	0.3049	$0.306^{+0.022}_{-0.021}$	$D_A/\text{Gpc}$	13.924	$13.920^{+0.078}_{-0.076}$			

Best-fit  $\chi^2_{\text{eff}} = 11979.06$ ;  $\bar{\chi}^2_{\text{eff}} = 11998.93$ ;  $R - 1 = 0.00900$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.25 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.98 plik\_dx11dr2\_HM\_v18\_TT: 766.24 SN - JLA December\_2013: 706.59

## 2.117 base\_plikHM\_TT\_lowTEB\_lensing\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022298	$0.02229^{+0.00046}_{-0.00044}$	$\Omega_m h^2$	0.14103	$0.1411^{+0.0035}_{-0.0035}$	$z_{\text{drag}}$	1059.63	$1059.62^{+0.93}_{-0.91}$
$\Omega_c h^2$	0.11809	$0.1182^{+0.0037}_{-0.0038}$	$\Omega_m h^3$	0.09593	$0.09594^{+0.00089}_{-0.00086}$	$r_{\text{drag}}$	147.68	$147.67^{+0.84}_{-0.84}$
$100\theta_{\text{MC}}$	1.04107	$1.04109^{+0.00089}_{-0.00088}$	$\sigma_8$	0.8156	$0.816^{+0.019}_{-0.018}$	$k_{\text{D}}$	0.14019	$0.14020^{+0.00092}_{-0.00091}$
$\tau$	0.0687	$0.068^{+0.032}_{-0.031}$	$\sigma_8 \Omega_m^{0.5}$	0.4503	$0.451^{+0.017}_{-0.017}$	$100\theta_{\text{D}}$	0.16094	$0.16095^{+0.00052}_{-0.00052}$
$\ln(10^{10} A_s)$	3.067	$3.067^{+0.058}_{-0.056}$	$\sigma_8 \Omega_m^{0.25}$	0.6060	$0.606^{+0.015}_{-0.015}$	$z_{\text{eq}}$	3355	$3357^{+83}_{-84}$
$n_s$	0.9692	$0.969^{+0.012}_{-0.011}$	$\sigma_8/h^{0.5}$	0.9889	$0.989^{+0.022}_{-0.022}$	$k_{\text{eq}}$	0.010239	$0.01024^{+0.00025}_{-0.00025}$
$y_{\text{cal}}$	0.99999	$1.0002^{+0.0049}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.445	$2.447^{+0.049}_{-0.051}$	$100\theta_{\text{eq}}$	0.8218	$0.822^{+0.017}_{-0.016}$
$A_{217}^{\text{CIB}}$	67.4	$64^{+10}_{-10}$	$z_{\text{re}}$	9.08	$9.0^{+3.0}_{-3.0}$	$100\theta_{\text{s,eq}}$	0.4539	$0.4538^{+0.0084}_{-0.0081}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$10^9 A_s$	2.147	$2.15^{+0.13}_{-0.12}$	$r_{\text{drag}}/D_V(0.57)$	0.07197	$0.0720^{+0.0013}_{-0.0013}$
$A_{143}^{\text{tSZ}}$	7.14	$5.1^{+3.7}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8714	$1.872^{+0.025}_{-0.024}$	$H(0.57)$	93.15	$93.15^{+0.80}_{-0.75}$
$A_{100}^{\text{PS}}$	255	$259^{+50}_{-50}$	$D_{40}$	1223.0	$1225^{+24}_{-25}$	$D_A(0.57)$	1382.4	$1383^{+23}_{-23}$
$A_{143}^{\text{PS}}$	39.2	$44^{+20}_{-20}$	$D_{220}$	5716	$5720^{+82}_{-79}$	$F_{\text{AP}}(0.57)$	0.6743	$0.6744^{+0.0058}_{-0.0057}$
$A_{143 \times 217}^{\text{PS}}$	33	$38^{+20}_{-20}$	$D_{810}$	2531.5	$2532^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4725	$0.473^{+0.011}_{-0.011}$
$A_{217}^{\text{PS}}$	97.0	$96^{+20}_{-20}$	$D_{1420}$	814.9	$815^{+10}_{-10}$	$\sigma_8(0.57)$	0.6083	$0.608^{+0.017}_{-0.016}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.26	$230.2^{+3.6}_{-3.6}$	$f_{2000}^{143}$	29.9	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.40	$7.5^{+3.7}_{-3.7}$	$n_{\text{s},0.002}$	0.9692	$0.969^{+0.012}_{-0.011}$	$f_{2000}^{143 \times 217}$	32.45	$33^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.06	$9.0^{+3.7}_{-3.6}$	$Y_{\text{P}}$	0.245361	$0.24536^{+0.00020}_{-0.00020}$	$f_{2000}^{217}$	106.03	$106.1^{+4.0}_{-3.9}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.1}_{-8.2}$	$Y_{\text{P}}^{\text{BBN}}$	0.246688	$0.24668^{+0.00020}_{-0.00020}$	$\chi_{\text{lensing}}^2$	9.07	$9.8 (\nu: 1.0)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$10^5 D/H$	2.605	$2.606^{+0.085}_{-0.085}$	$\chi_{\text{lowTEB}}^2$	10494.80	$10495.5 (\nu: 0.8)$
$c_{100}$	0.99789	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.792	$13.792^{+0.072}_{-0.074}$	$\chi_{\text{plik}}^2$	766.5	$779.5 (\nu: 15.4)$
$c_{217}$	0.99604	$0.9960^{+0.0028}_{-0.0029}$	$z_*$	1089.84	$1089.86^{+0.79}_{-0.81}$	$\chi_{\text{H070p6}}^2$	0.61	$0.68 (\nu: 0.1)$
$H_0$	68.02	$68.0^{+1.7}_{-1.7}$	$r_*$	144.98	$144.97^{+0.85}_{-0.83}$	$\chi_{\text{prior}}^2$	2.1	$7.4 (\nu: 6.3)$
$\Omega_{\Lambda}$	0.6952	$0.695^{+0.022}_{-0.023}$	$100\theta_*$	1.04127	$1.04128^{+0.00087}_{-0.00087}$	$\chi_{\text{CMB}}^2$	11270.4	$11284.9 (\nu: 15.1)$
$\Omega_{\text{m}}$	0.3048	$0.305^{+0.023}_{-0.022}$	$D_{\text{A}}/\text{Gpc}$	13.924	$13.922^{+0.079}_{-0.078}$			

Best-fit  $\chi_{\text{eff}}^2 = 11273.10$ ;  $\bar{\chi}_{\text{eff}}^2 = 11292.96$ ;  $R - 1 = 0.00870$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.07 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.80 plik\_dx11dr2\_HM\_v18.TT: 766.50 Hubble - H070p6: 0.60

## 2.118 base\_plikHM\_TT\_lowTEB\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022274	$0.02227^{+0.00039}_{-0.00038}$	$\sigma_8$	0.8162	$0.815^{+0.018}_{-0.017}$	$z_{\text{eq}}$	3362	$3361^{+54}_{-53}$
$\Omega_c h^2$	0.11840	$0.1184^{+0.0023}_{-0.0023}$	$\sigma_8 \Omega_m^{0.5}$	0.4520	$0.451^{+0.013}_{-0.013}$	$k_{\text{eq}}$	0.010260	$0.01026^{+0.00016}_{-0.00016}$
$100\theta_{\text{MC}}$	1.04106	$1.04106^{+0.00080}_{-0.00081}$	$\sigma_8 \Omega_m^{0.25}$	0.6074	$0.607^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	0.8205	$0.821^{+0.010}_{-0.010}$
$\tau$	0.0677	$0.067^{+0.026}_{-0.025}$	$\sigma_8/h^{0.5}$	0.9906	$0.989^{+0.021}_{-0.021}$	$100\theta_{\text{s,eq}}$	0.4532	$0.4533^{+0.0051}_{-0.0052}$
$\ln(10^{10} A_s)$	3.0661	$3.064^{+0.048}_{-0.047}$	$\langle d^2 \rangle^{1/2}$	2.4496	$2.448^{+0.048}_{-0.050}$	$r_{\text{drag}}/D_V(0.57)$	0.07186	$0.07188^{+0.00080}_{-0.00078}$
$n_s$	0.9683	$0.9681^{+0.0087}_{-0.0087}$	$z_{\text{re}}$	8.99	$8.9^{+2.3}_{-2.5}$	$H(0.57)$	93.09	$93.10^{+0.54}_{-0.52}$
$y_{\text{cal}}$	1.00033	$1.0002^{+0.0049}_{-0.0048}$	$10^9 A_s$	2.146	$2.14^{+0.10}_{-0.099}$	$D_A(0.57)$	1384.1	$1384^{+14}_{-15}$
$A_{217}^{\text{CIB}}$	67.7	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8741	$1.873^{+0.022}_{-0.022}$	$F_{\text{AP}}(0.57)$	0.67480	$0.6747^{+0.0036}_{-0.0036}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1225.5	$1226^{+23}_{-23}$	$f\sigma_8(0.57)$	0.4733	$0.473^{+0.010}_{-0.010}$
$A_{143}^{\text{tSZ}}$	7.22	$5.1^{+3.7}_{-3.8}$	$D_{220}$	5720	$5719^{+79}_{-77}$	$\sigma_8(0.57)$	0.6084	$0.608^{+0.015}_{-0.014}$
$A_{100}^{\text{PS}}$	254	$259^{+50}_{-50}$	$D_{810}$	2533.4	$2532^{+27}_{-27}$	$f_{2000}^{143}$	30.0	$30^{+6}_{-5}$
$A_{143}^{\text{PS}}$	39.0	$44^{+20}_{-20}$	$D_{1420}$	815.2	$814.7^{+9.8}_{-10}$	$f_{2000}^{143 \times 217}$	32.57	$33^{+4}_{-4}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{2000}$	230.30	$230.1^{+3.5}_{-3.5}$	$f_{2000}^{217}$	106.15	$106.2^{+3.9}_{-3.9}$
$A_{217}^{\text{PS}}$	96.8	$96^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9683	$0.9681^{+0.0087}_{-0.0087}$	$\chi_{\text{lensing}}^2$	9.26	$9.8 (\nu: 1.0)$
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.245350	$0.24535^{+0.00018}_{-0.00018}$	$\chi_{\text{lowTEB}}^2$	10494.92	$10495.4 (\nu: 0.6)$
$A_{100}^{\text{dustTT}}$	7.46	$7.5^{+3.7}_{-3.7}$	$Y_{\text{P}}^{\text{BBN}}$	0.246677	$0.24668^{+0.00018}_{-0.00018}$	$\chi_{\text{plik}}^2$	766.1	$779.1 (\nu: 14.9)$
$A_{143}^{\text{dustTT}}$	9.18	$9.0^{+3.7}_{-3.6}$	$10^5 D/H$	2.609	$2.610^{+0.074}_{-0.074}$	$\chi_{\text{H070p6}}^2$	0.67	$0.69 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.3}_{-8.3}$	$\text{Age/Gyr}$	13.796	$13.796^{+0.055}_{-0.057}$	$\chi_{\text{JLA}}^2$	706.627	$706.67 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$z_*$	1089.90	$1089.90^{+0.59}_{-0.60}$	$\chi_{6\text{DF}}^2$	0.003	$0.039 (\nu: 0.0)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.92	$144.93^{+0.58}_{-0.59}$	$\chi_{\text{MGS}}^2$	1.54	$1.63 (\nu: 0.2)$
$c_{217}$	0.99598	$0.9960^{+0.0028}_{-0.0029}$	$100\theta_*$	1.04125	$1.04126^{+0.00079}_{-0.00079}$	$\chi_{\text{DR11CMass}}^2$	2.41	$2.82 (\nu: 0.2)$
$H_0$	67.89	$67.9^{+1.1}_{-1.1}$	$D_A/\text{Gpc}$	13.918	$13.919^{+0.058}_{-0.057}$	$\chi_{\text{DR11LOWZ}}^2$	0.37	$0.48 (\nu: 0.1)$
$\Omega_\Lambda$	0.6933	$0.693^{+0.014}_{-0.014}$	$z_{\text{drag}}$	1059.59	$1059.60^{+0.87}_{-0.84}$	$\chi_{\text{prior}}^2$	2.1	$7.4 (\nu: 6.4)$
$\Omega_m$	0.3067	$0.307^{+0.014}_{-0.014}$	$r_{\text{drag}}$	147.62	$147.63^{+0.64}_{-0.64}$	$\chi_{\text{CMB}}^2$	11270.3	$11284.3 (\nu: 14.6)$
$\Omega_m h^2$	0.14132	$0.1413^{+0.0023}_{-0.0022}$	$k_{\text{D}}$	0.14023	$0.14022^{+0.00083}_{-0.00081}$	$\chi_{\text{BAO}}^2$	4.33	$4.96 (\nu: 0.4)$
$\Omega_m h^3$	0.09593	$0.09593^{+0.00088}_{-0.00085}$	$100\theta_{\text{D}}$	0.16096	$0.16097^{+0.00049}_{-0.00050}$			

Best-fit  $\chi_{\text{eff}}^2 = 11984.07$ ;  $\bar{\chi}_{\text{eff}}^2 = 12004.02$ ;  $R - 1 = 0.00967$   
 $\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.54 DR11CMass: 2.41 DR11LOWZ: 0.37 CMB - smica\_g30\_ftl\_full\_pp: 9.26 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.92 plik\_dx11dr2\_HM\_v18\_TT: 766.13 Hubble - H070p6: 0.67 SN - JLA December\_2013: 706.63

## 2.119 base\_plikHM\_TT\_lowTEB\_lensing\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02227^{+0.00045}_{-0.00043}$	$\Omega_m h^2$	$0.1413^{+0.0032}_{-0.0035}$	$z_{\text{drag}}$	$1059.59^{+0.92}_{-0.91}$
$\Omega_c h^2$	$0.1183^{+0.0036}_{-0.0037}$	$\Omega_m h^3$	$0.09592^{+0.00089}_{-0.00086}$	$r_{\text{drag}}$	$147.64^{+0.84}_{-0.80}$
$100\theta_{\text{MC}}$	$1.04106^{+0.00088}_{-0.00085}$	$\sigma_8$	$0.816^{+0.018}_{-0.016}$	$k_{\text{D}}$	$0.14021^{+0.00091}_{-0.00089}$
$\tau$	$0.068^{+0.028}_{-0.027}$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.017}_{-0.017}$	$100\theta_{\text{D}}$	$0.16097^{+0.00053}_{-0.00052}$
$\ln(10^{10} A_s)$	$3.067^{+0.052}_{-0.049}$	$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.015}_{-0.015}$	$z_{\text{eq}}$	$3360^{+77}_{-83}$
$n_s$	$0.968^{+0.011}_{-0.011}$	$\sigma_8/h^{0.5}$	$0.990^{+0.021}_{-0.022}$	$k_{\text{eq}}$	$0.01026^{+0.00023}_{-0.00025}$
$y_{\text{cal}}$	$1.0001^{+0.0049}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	$2.450^{+0.048}_{-0.050}$	$100\theta_{\text{eq}}$	$0.821^{+0.016}_{-0.016}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$z_{\text{re}}$	$< 11.2$	$100\theta_{\text{s,eq}}$	$0.4534^{+0.0082}_{-0.0080}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s$	$2.15^{+0.11}_{-0.10}$	$r_{\text{drag}}/D_{\text{V}}(0.57)$	$0.0719^{+0.0013}_{-0.0012}$
$A_{143}^{\text{tSZ}}$	$5.1^{+3.7}_{-3.8}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.024}_{-0.024}$	$H(0.57)$	$93.11^{+0.79}_{-0.75}$
$A_{100}^{\text{PS}}$	$260^{+50}_{-50}$	$D_{40}$	$1226^{+24}_{-24}$	$D_{\text{A}}(0.57)$	$1384^{+22}_{-23}$
$A_{143}^{\text{PS}}$	$44^{+20}_{-20}$	$D_{220}$	$5717^{+81}_{-79}$	$F_{\text{AP}}(0.57)$	$0.6747^{+0.0056}_{-0.0057}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$D_{810}$	$2532^{+27}_{-27}$	$f\sigma_8(0.57)$	$0.473^{+0.010}_{-0.010}$
$A_{217}^{\text{PS}}$	$96^{+20}_{-20}$	$D_{1420}$	$815^{+10}_{-10}$	$\sigma_8(0.57)$	$0.608^{+0.015}_{-0.014}$
$A^{\text{kSZ}}$	—	$D_{2000}$	$230.1^{+3.6}_{-3.6}$	$f_{2000}^{143}$	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	$7.5^{+3.7}_{-3.7}$	$n_{\text{s},0.002}$	$0.968^{+0.011}_{-0.011}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	$9.0^{+3.7}_{-3.6}$	$Y_{\text{P}}$	$0.24535^{+0.00020}_{-0.00020}$	$f_{2000}^{217}$	$106.2^{+3.9}_{-3.9}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.2^{+8.1}_{-8.2}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24667^{+0.00020}_{-0.00020}$	$\chi^2_{\text{lensing}}$	$9.9 (\nu: 1.2)$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	$2.610^{+0.083}_{-0.085}$	$\chi^2_{\text{lowTEB}}$	$10495.5 (\nu: 0.7)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$\text{Age}/\text{Gyr}$	$13.796^{+0.068}_{-0.074}$	$\chi^2_{\text{plik}}$	$779.3 (\nu: 15.2)$
$c_{217}$	$0.9960^{+0.0028}_{-0.0028}$	$z_*$	$1089.90^{+0.74}_{-0.80}$	$\chi^2_{\text{prior}}$	$7.4 (\nu: 6.3)$
$H_0$	$67.9^{+1.7}_{-1.7}$	$r_*$	$144.94^{+0.84}_{-0.78}$	$\chi^2_{\text{CMB}}$	$11284.7 (\nu: 14.7)$
$\Omega_{\Lambda}$	$0.694^{+0.022}_{-0.021}$	$100\theta_*$	$1.04126^{+0.00086}_{-0.00084}$		
$\Omega_{\text{m}}$	$0.306^{+0.021}_{-0.022}$	$D_{\text{A}}/\text{Gpc}$	$13.919^{+0.078}_{-0.074}$		

$$\bar{\chi}^2_{\text{eff}} = 11292.06; R - 1 = 0.01013$$



## 2.120 base\_plikHM\_TT\_lowTEB\_lensing\_post\_BAO\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02225^{+0.00040}_{-0.00038}$	$\Omega_m h^3$	$0.09591^{+0.00087}_{-0.00085}$	$k_D$	$0.14023^{+0.00083}_{-0.00081}$
$\Omega_c h^2$	$0.1186^{+0.0023}_{-0.0024}$	$\sigma_8$	$0.816^{+0.017}_{-0.017}$	$100\theta_D$	$0.16099^{+0.00050}_{-0.00050}$
$100\theta_{MC}$	$1.04104^{+0.00080}_{-0.00079}$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.013}_{-0.013}$	$z_{eq}$	$3365^{+54}_{-53}$
$\tau$	$0.067^{+0.023}_{-0.023}$	$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.013}_{-0.013}$	$k_{eq}$	$0.01027^{+0.00016}_{-0.00016}$
$\ln(10^{10} A_s)$	$3.064^{+0.043}_{-0.044}$	$\sigma_8/h^{0.5}$	$0.991^{+0.021}_{-0.020}$	$100\theta_{eq}$	$0.820^{+0.010}_{-0.010}$
$n_s$	$0.9676^{+0.0086}_{-0.0086}$	$\langle d^2 \rangle^{1/2}$	$2.450^{+0.047}_{-0.047}$	$100\theta_{s,eq}$	$0.4529^{+0.0053}_{-0.0051}$
$y_{cal}$	$1.0001^{+0.0049}_{-0.0048}$	$z_{re}$	$8.9^{+2.0}_{-2.3}$	$r_{drag}/D_V(0.57)$	$0.07181^{+0.00082}_{-0.00078}$
$A_{217}^{CIB}$	$65^{+10}_{-10}$	$10^9 A_s$	$2.142^{+0.094}_{-0.093}$	$H(0.57)$	$93.06^{+0.54}_{-0.51}$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.874^{+0.022}_{-0.022}$	$D_A(0.57)$	$1385^{+14}_{-15}$
$A_{143}^{tSZ}$	$5.1^{+3.7}_{-3.8}$	$D_{40}$	$1226^{+23}_{-22}$	$F_{AP}(0.57)$	$0.6751^{+0.0036}_{-0.0036}$
$A_{100}^{PS}$	$260^{+50}_{-50}$	$D_{220}$	$5717^{+79}_{-77}$	$f\sigma_8(0.57)$	$0.473^{+0.010}_{-0.0097}$
$A_{143}^{PS}$	$44^{+20}_{-20}$	$D_{810}$	$2532^{+26}_{-27}$	$\sigma_8(0.57)$	$0.608^{+0.013}_{-0.013}$
$A_{143 \times 217}^{PS}$	$39^{+20}_{-20}$	$D_{1420}$	$814.5^{+9.9}_{-10}$	$f_{2000}^{143}$	$30^{+6}_{-5}$
$A_{217}^{PS}$	$96^{+20}_{-20}$	$D_{2000}$	$230.0^{+3.5}_{-3.5}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A^{kSZ}$	—	$n_{s,0.002}$	$0.9676^{+0.0086}_{-0.0086}$	$f_{2000}^{217}$	$106.3^{+3.9}_{-3.9}$
$A_{100}^{dustTT}$	$7.5^{+3.7}_{-3.7}$	$Y_P$	$0.24534^{+0.00018}_{-0.00018}$	$\chi^2_{lensing}$	$9.9 (\nu: 1.1)$
$A_{143}^{dustTT}$	$9.0^{+3.7}_{-3.6}$	$Y_P^{BBN}$	$0.24667^{+0.00018}_{-0.00018}$	$\chi^2_{lowTEB}$	$10495.4 (\nu: 0.5)$
$A_{143 \times 217}^{dustTT}$	$17.2^{+8.2}_{-8.3}$	$10^5 D/H$	$2.614^{+0.074}_{-0.075}$	$\chi^2_{plik}$	$778.9 (\nu: 14.7)$
$A_{217}^{dustTT}$	$82^{+10}_{-10}$	$Age/Gyr$	$13.800^{+0.055}_{-0.057}$	$\chi^2_{6DF}$	$0.043 (\nu: 0.0)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	$1089.94^{+0.58}_{-0.60}$	$\chi^2_{MGS}$	$1.54 (\nu: 0.2)$
$c_{217}$	$0.9960^{+0.0028}_{-0.0029}$	$r_*$	$144.90^{+0.59}_{-0.59}$	$\chi^2_{DR11CMass}$	$2.81 (\nu: 0.2)$
$H_0$	$67.8^{+1.1}_{-1.1}$	$100\theta_*$	$1.04123^{+0.00079}_{-0.00079}$	$\chi^2_{DR11LOWZ}$	$0.55 (\nu: 0.1)$
$\Omega_\Lambda$	$0.692^{+0.014}_{-0.014}$	$D_A/Gpc$	$13.916^{+0.057}_{-0.058}$	$\chi^2_{prior}$	$7.4 (\nu: 6.4)$
$\Omega_m$	$0.308^{+0.014}_{-0.014}$	$z_{drag}$	$1059.56^{+0.88}_{-0.84}$	$\chi^2_{CMB}$	$11284.2 (\nu: 14.3)$
$\Omega_m h^2$	$0.1415^{+0.0022}_{-0.0022}$	$r_{drag}$	$147.61^{+0.64}_{-0.64}$	$\chi^2_{BAO}$	$4.94 (\nu: 0.4)$

$$\bar{\chi}^2_{eff} = 11296.53; R - 1 = 0.01108$$

## 2.121 base\_plikHM\_TT\_lowTEB\_lensing\_post\_reion

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022176	$0.02218^{+0.00042}_{-0.00039}$	$\Omega_m h^2$	0.14257	$0.1423^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.47	$1059.46^{+0.89}_{-0.87}$
$\Omega_c h^2$	0.11975	$0.1195^{+0.0029}_{-0.0030}$	$\Omega_m h^3$	0.09589	$0.09588^{+0.00088}_{-0.00084}$	$r_{\text{drag}}$	147.37	$147.43^{+0.72}_{-0.74}$
$100\theta_{\text{MC}}$	1.04084	$1.04089^{+0.00079}_{-0.00080}$	$\sigma_8$	0.8089	$0.810^{+0.012}_{-0.012}$	$k_D$	0.14042	$0.14036^{+0.00094}_{-0.00087}$
$\tau$	0.0526	$0.055^{+0.014}_{-0.013}$	$\sigma_8 \Omega_m^{0.5}$	0.4541	$0.453^{+0.016}_{-0.017}$	$100\theta_D$	0.16103	$0.16103^{+0.00050}_{-0.00051}$
$\ln(10^{10} A_s)$	3.0390	$3.043^{+0.028}_{-0.026}$	$\sigma_8 \Omega_m^{0.25}$	0.6061	$0.606^{+0.014}_{-0.015}$	$z_{\text{eq}}$	3392	$3386^{+68}_{-67}$
$n_s$	0.9648	$0.9648^{+0.0091}_{-0.0087}$	$\sigma_8/h^{0.5}$	0.9864	$0.986^{+0.019}_{-0.020}$	$k_{\text{eq}}$	0.010352	$0.01033^{+0.00021}_{-0.00020}$
$y_{\text{cal}}$	1.00029	$1.0003^{+0.0049}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.4381	$2.440^{+0.046}_{-0.047}$	$100\theta_{\text{eq}}$	0.8146	$0.816^{+0.013}_{-0.012}$
$A_{217}^{\text{CIB}}$	67.7	$65^{+10}_{-10}$	$z_{\text{re}}$	7.54	$< 9.00$	$100\theta_{s,\text{eq}}$	0.4502	$0.4508^{+0.0066}_{-0.0062}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.089	$2.096^{+0.060}_{-0.055}$	$r_{\text{drag}}/D_V(0.57)$	0.07139	$0.0715^{+0.0010}_{-0.00092}$
$A_{143}^{\text{tSZ}}$	7.11	$4.9^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8800	$1.879^{+0.021}_{-0.022}$	$H(0.57)$	92.83	$92.87^{+0.63}_{-0.58}$
$A_{100}^{\text{PS}}$	256	$262^{+50}_{-50}$	$D_{40}$	1228.4	$1229^{+24}_{-23}$	$D_A(0.57)$	1392.5	$1391^{+17}_{-18}$
$A_{143}^{\text{PS}}$	40.9	$45^{+20}_{-20}$	$D_{220}$	5715	$5718^{+80}_{-84}$	$F_{\text{AP}}(0.57)$	0.67697	$0.6766^{+0.0043}_{-0.0046}$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$D_{810}$	2535.3	$2534^{+26}_{-27}$	$f\sigma_8(0.57)$	0.4712	$0.4712^{+0.0093}_{-0.0096}$
$A_{217}^{\text{PS}}$	97.9	$96^{+20}_{-20}$	$D_{1420}$	814.8	$814^{+10}_{-10}$	$\sigma_8(0.57)$	0.6009	$0.6017^{+0.0087}_{-0.0084}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	229.79	$229.6^{+3.5}_{-3.6}$	$f_{2000}^{143}$	30.6	$31^{+5}_{-5}$
$A_{100}^{\text{dustTT}}$	7.45	$7.4^{+3.6}_{-3.8}$	$n_{s,0.002}$	0.9648	$0.9648^{+0.0091}_{-0.0087}$	$f_{2000}^{143 \times 217}$	33.17	$33^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.08	$9.0^{+3.7}_{-3.6}$	$Y_{\text{P}}$	0.245306	$0.24531^{+0.00019}_{-0.00018}$	$f_{2000}^{217}$	106.67	$106.8^{+3.6}_{-3.7}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.2^{+8.2}_{-8.5}$	$Y_{\text{P}}^{\text{BBN}}$	0.246632	$0.24663^{+0.00019}_{-0.00018}$	$\chi_{\text{lensing}}^2$	9.00	$9.6 (\nu: 0.7)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$10^5 D/H$	2.628	$2.627^{+0.077}_{-0.079}$	$\chi_{\text{lowTEB}}^2$	10495.29	$10495.5 (\nu: 0.5)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.818	$13.815^{+0.060}_{-0.063}$	$\chi_{\text{plik}}^2$	766.9	$779.5 (\nu: 14.5)$
$c_{217}$	0.99602	$0.9961^{+0.0028}_{-0.0028}$	$z_*$	1090.14	$1090.12^{+0.65}_{-0.69}$	$\chi_{\text{prior}}^2$	2.3	$8.5 (\nu: 7.4)$
$H_0$	67.26	$67.4^{+1.4}_{-1.3}$	$r_*$	144.64	$144.70^{+0.69}_{-0.70}$	$\chi_{\text{CMB}}^2$	11271.2	$11284.6 (\nu: 14.2)$
$\Omega_\Lambda$	0.6848	$0.686^{+0.018}_{-0.017}$	$100\theta_*$	1.04105	$1.04109^{+0.00077}_{-0.00078}$			
$\Omega_m$	0.3152	$0.314^{+0.017}_{-0.018}$	$D_A/\text{Gpc}$	13.894	$13.899^{+0.065}_{-0.068}$			

Best-fit  $\chi_{\text{eff}}^2 = 11273.51$ ;  $\bar{\chi}_{\text{eff}}^2 = 11293.12$ ;  $R - 1 = 0.01693$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.00 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.29 plik\_dx11dr2\_HM\_v18\_TT: 766.87

## 2.122 base\_plikHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022274	$0.02226^{+0.00031}_{-0.00030}$	$A_{143}^{\text{dustTE}}$	0.155	$0.15^{+0.11}_{-0.11}$	$z_*$	1089.97	$1090.00^{+0.56}_{-0.58}$
$\Omega_c h^2$	0.11913	$0.1193^{+0.0027}_{-0.0028}$	$A_{143 \times 217}^{\text{dustTE}}$	0.340	$0.34^{+0.16}_{-0.16}$	$r_*$	144.73	$144.71^{+0.59}_{-0.59}$
$100\theta_{\text{MC}}$	1.04087	$1.04087^{+0.00063}_{-0.00062}$	$A_{217}^{\text{dustTE}}$	1.662	$1.66^{+0.50}_{-0.50}$	$100\theta_*$	1.04106	$1.04106^{+0.00062}_{-0.00061}$
$\tau$	0.0639	$0.063^{+0.027}_{-0.027}$	$c_{100}$	0.99816	$0.9981^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.902	$13.900^{+0.056}_{-0.055}$
$\ln(10^{10} A_s)$	3.0600	$3.059^{+0.050}_{-0.049}$	$c_{217}$	0.99606	$0.9960^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.67	$1059.62^{+0.63}_{-0.60}$
$n_s$	0.9660	$0.9653^{+0.0093}_{-0.0094}$	$H_0$	67.56	$67.5^{+1.3}_{-1.2}$	$r_{\text{drag}}$	147.43	$147.41^{+0.58}_{-0.58}$
$y_{\text{cal}}$	0.99995	$1.0001^{+0.0047}_{-0.0048}$	$\Omega_\Lambda$	0.6888	$0.688^{+0.017}_{-0.017}$	$k_D$	0.14044	$0.14044^{+0.00062}_{-0.00061}$
$A_{217}^{\text{CIB}}$	67.7	$65^{+10}_{-10}$	$\Omega_m$	0.3112	$0.312^{+0.017}_{-0.017}$	$100\theta_D$	0.160911	$0.16093^{+0.00035}_{-0.00036}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$\Omega_m h^2$	0.14205	$0.1422^{+0.0026}_{-0.0026}$	$z_{\text{eq}}$	3379	$3382^{+61}_{-62}$
$A_{143}^{\text{tSZ}}$	7.31	$5.3^{+3.7}_{-3.8}$	$\Omega_m h^3$	0.09597	$0.09596^{+0.00058}_{-0.00057}$	$k_{\text{eq}}$	0.010313	$0.01032^{+0.00019}_{-0.00019}$
$A_{100}^{\text{PS}}$	257	$262^{+50}_{-50}$	$\sigma_8$	0.8153	$0.815^{+0.017}_{-0.017}$	$100\theta_{\text{eq}}$	0.8171	$0.817^{+0.012}_{-0.012}$
$A_{143}^{\text{PS}}$	38.7	$44^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4548	$0.455^{+0.013}_{-0.014}$	$100\theta_{s,\text{eq}}$	0.4515	$0.4512^{+0.0062}_{-0.0059}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6089	$0.609^{+0.013}_{-0.013}$	$r_{\text{drag}}/D_V(0.57)$	0.07159	$0.07156^{+0.00096}_{-0.00092}$
$A_{217}^{\text{PS}}$	96.7	$96^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9919	$0.992^{+0.020}_{-0.020}$	$H(0.57)$	92.97	$92.95^{+0.57}_{-0.52}$
$A^{\text{kSZ}}$	0.01	$< 8.22$	$\langle d^2 \rangle^{1/2}$	2.4545	$2.455^{+0.048}_{-0.048}$	$D_A(0.57)$	1388.3	$1389^{+17}_{-17}$
$A_{100}^{\text{dustTT}}$	7.58	$7.5^{+3.7}_{-3.7}$	$z_{\text{re}}$	8.64	$8.5^{+2.5}_{-2.7}$	$F_{\text{AP}}(0.57)$	0.67595	$0.6762^{+0.0043}_{-0.0044}$
$A_{143}^{\text{dustTT}}$	9.06	$9.0^{+3.6}_{-3.6}$	$10^9 A_s$	2.133	$2.13^{+0.11}_{-0.10}$	$f\sigma_8(0.57)$	0.4739	$0.4740^{+0.0096}_{-0.0097}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.1}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8769	$1.878^{+0.022}_{-0.023}$	$\sigma_8(0.57)$	0.6066	$0.606^{+0.014}_{-0.014}$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$D_{40}$	1229.6	$1232^{+24}_{-23}$	$f_{2000}^{143}$	29.8	$30^{+5}_{-5}$
$A_{100}^{\text{dustEE}}$	0.0814	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5723	$5725^{+74}_{-76}$	$f_{2000}^{143 \times 217}$	32.54	$33^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0492	$0.0490^{+0.0098}_{-0.0099}$	$D_{810}$	2533.3	$2534^{+26}_{-26}$	$f_{2000}^{217}$	106.05	$106.2^{+3.6}_{-3.7}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.0997^{+0.064}_{-0.062}$	$D_{1420}$	814.6	$814.6^{+9.2}_{-9.3}$	$\chi^2_{\text{lensing}}$	9.78	$10.4 (\nu: 1.7)$
$A_{143}^{\text{dustEE}}$	0.1006	$0.100^{+0.013}_{-0.014}$	$D_{2000}$	230.06	$230.0^{+3.1}_{-3.1}$	$\chi^2_{\text{lowTEB}}$	10495.29	$10495.9 (\nu: 0.6)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.224^{+0.091}_{-0.091}$	$n_{s,0.002}$	0.9660	$0.9653^{+0.0093}_{-0.0094}$	$\chi^2_{\text{plik}}$	2434.9	$2453.4 (\nu: 22.7)$
$A_{217}^{\text{dustEE}}$	0.649	$0.65^{+0.26}_{-0.25}$	$Y_P$	0.245350	$0.24534^{+0.00014}_{-0.00014}$	$\chi^2_{\text{prior}}$	7.2	$19.4 (\nu: 15.0)$
$A_{100}^{\text{dustTE}}$	0.140	$0.141^{+0.075}_{-0.074}$	$Y_P^{\text{BBN}}$	0.246677	$0.24667^{+0.00014}_{-0.00014}$	$\chi^2_{\text{CMB}}$	12940.0	$12959.7 (\nu: 22.3)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.132^{+0.057}_{-0.058}$	$10^5 D/H$	2.610	$2.613^{+0.058}_{-0.058}$			
$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.16}_{-0.17}$	Age/Gyr	13.805	$13.807^{+0.049}_{-0.051}$			

Best-fit  $\chi^2_{\text{eff}} = 12947.17$ ;  $\bar{\chi}^2_{\text{eff}} = 12979.12$ ;  $R - 1 = 0.01038$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.78 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.29 plik\_dx11dr2\_HM\_v18.TTTEEE: 2434.91

### 2.123 base\_plikHM\_TTTEEE\_lowTEB\_lensing\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022283	$0.02228^{+0.00027}_{-0.00027}$	$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04109	$1.04110^{+0.00059}_{-0.00057}$
$\Omega_c h^2$	0.11893	$0.1190^{+0.0021}_{-0.0021}$	$A_{217}^{\text{dustTE}}$	1.67	$1.66^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	13.9062	$13.906^{+0.044}_{-0.046}$
$100\theta_{\text{MC}}$	1.04089	$1.04090^{+0.00060}_{-0.00058}$	$c_{100}$	0.99821	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.67	$1059.65^{+0.60}_{-0.59}$
$\tau$	0.0649	$0.065^{+0.0024}_{-0.0024}$	$c_{217}$	0.99606	$0.9961^{+0.0029}_{-0.0028}$	$r_{\text{drag}}$	147.472	$147.47^{+0.48}_{-0.49}$
$\ln(10^{10} A_s)$	3.0616	$3.062^{+0.045}_{-0.045}$	$H_0$	67.65	$67.64^{+0.95}_{-0.92}$	$k_D$	0.14040	$0.14040^{+0.00057}_{-0.00056}$
$n_s$	0.9665	$0.9661^{+0.0078}_{-0.0080}$	$\Omega_\Lambda$	0.6900	$0.690^{+0.012}_{-0.013}$	$100\theta_D$	0.160909	$0.16092^{+0.00033}_{-0.00034}$
$y_{\text{cal}}$	0.99996	$1.0002^{+0.0047}_{-0.0047}$	$\Omega_m$	0.3100	$0.310^{+0.013}_{-0.012}$	$z_{\text{eq}}$	3374.4	$3375^{+47}_{-46}$
$A_{217}^{\text{CIB}}$	67.5	$65^{+10}_{-10}$	$\Omega_m h^2$	0.14185	$0.1419^{+0.0020}_{-0.0019}$	$k_{\text{eq}}$	0.010299	$0.01030^{+0.00014}_{-0.00014}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$\Omega_m h^3$	0.09596	$0.09597^{+0.00058}_{-0.00057}$	$100\theta_{\text{eq}}$	0.8180	$0.8179^{+0.0089}_{-0.0088}$
$A_{143}^{\text{tSZ}}$	7.36	$5.3^{+3.6}_{-3.7}$	$\sigma_8$	0.8154	$0.816^{+0.017}_{-0.017}$	$100\theta_{s,\text{eq}}$	0.45191	$0.4519^{+0.0045}_{-0.0045}$
$A_{100}^{\text{PS}}$	257	$262^{+60}_{-60}$	$\sigma_8 \Omega_m^{0.5}$	0.4540	$0.454^{+0.012}_{-0.012}$	$r_{\text{drag}}/D_V(0.57)$	0.07166	$0.07166^{+0.00070}_{-0.00069}$
$A_{143}^{\text{PS}}$	38.4	$44^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6084	$0.609^{+0.013}_{-0.013}$	$H(0.57)$	93.005	$93.00^{+0.43}_{-0.42}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9914	$0.992^{+0.020}_{-0.020}$	$D_A(0.57)$	1387.2	$1387^{+12}_{-13}$
$A_{217}^{\text{PS}}$	96.8	$96^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4532	$2.455^{+0.048}_{-0.048}$	$F_{\text{AP}}(0.57)$	0.67564	$0.6757^{+0.0032}_{-0.0032}$
$A^{\text{kSZ}}$	0.00	$< 8.07$	$z_{\text{re}}$	8.73	$8.7^{+2.2}_{-2.4}$	$f\sigma_8(0.57)$	0.4737	$0.4738^{+0.0096}_{-0.0098}$
$A_{100}^{\text{dustTT}}$	7.50	$7.5^{+3.7}_{-3.6}$	$10^9 A_s$	2.136	$2.138^{+0.097}_{-0.094}$	$\sigma_8(0.57)$	0.6070	$0.607^{+0.014}_{-0.013}$
$A_{143}^{\text{dustTT}}$	9.03	$9.0^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8761	$1.877^{+0.021}_{-0.021}$	$f_{2000}^{143}$	29.7	$30^{+5}_{-5}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.0}_{-8.0}$	$D_{40}$	1228.7	$1231^{+23}_{-22}$	$f_{2000}^{143 \times 217}$	32.49	$33^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	82.2	$82^{+10}_{-10}$	$D_{220}$	5723	$5726^{+74}_{-75}$	$f_{2000}^{217}$	106.05	$106.2^{+3.6}_{-3.6}$
$A_{100}^{\text{dustEE}}$	0.0814	$0.081^{+0.011}_{-0.011}$	$D_{810}$	2533.2	$2534^{+26}_{-26}$	$\chi_{\text{lensing}}^2$	9.67	$10.4 (\nu: 1.6)$
$A_{100 \times 143}^{\text{dustEE}}$	0.0493	$0.0490^{+0.0096}_{-0.0098}$	$D_{1420}$	814.8	$814.8^{+9.1}_{-9.2}$	$\chi_{\text{lowTEB}}^2$	10495.21	$10495.7 (\nu: 0.5)$
$A_{100 \times 217}^{\text{dustEE}}$	0.0995	$0.0999^{+0.064}_{-0.062}$	$D_{2000}$	230.12	$230.1^{+3.0}_{-3.0}$	$\chi_{\text{plik}}^2$	2435.3	$2453.3 (\nu: 22.7)$
$A_{143}^{\text{dustEE}}$	0.1004	$0.101^{+0.013}_{-0.014}$	$n_{s,0.002}$	0.9665	$0.9661^{+0.0078}_{-0.0080}$	$\chi_{6\text{DF}}^2$	0.022	$0.050 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.225^{+0.091}_{-0.091}$	$Y_P$	0.245355	$0.24535^{+0.00012}_{-0.00013}$	$\chi_{\text{MGS}}^2$	1.28	$1.33 (\nu: 0.1)$
$A_{217}^{\text{dustEE}}$	0.652	$0.65^{+0.26}_{-0.25}$	$Y_P^{\text{BBN}}$	0.246681	$0.24668^{+0.00012}_{-0.00013}$	$\chi_{\text{DR11CMass}}^2$	2.45	$2.76 (\nu: 0.1)$
$A_{100}^{\text{dustTE}}$	0.142	$0.141^{+0.075}_{-0.074}$	$10^5 D/H$	2.608	$2.609^{+0.051}_{-0.051}$	$\chi_{\text{DR11LOWZ}}^2$	0.61	$0.71 (\nu: 0.1)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.132^{+0.056}_{-0.057}$	$\text{Age/Gyr}$	13.8026	$13.803^{+0.041}_{-0.042}$	$\chi_{\text{prior}}^2$	7.0	$19.4 (\nu: 14.8)$
$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.17}_{-0.17}$	$z_*$	1089.935	$1089.94^{+0.45}_{-0.46}$	$\chi_{\text{CMB}}^2$	12940.2	$12959.4 (\nu: 22.0)$
$A_{143}^{\text{dustTE}}$	0.154	$0.15^{+0.10}_{-0.11}$	$r_*$	144.776	$144.77^{+0.46}_{-0.48}$	$\chi_{\text{BAO}}^2$	4.36	$4.86 (\nu: 0.3)$

Best-fit  $\chi_{\text{eff}}^2 = 12951.58$ ;  $\bar{\chi}_{\text{eff}}^2 = 12983.64$ ;  $R - 1 = 0.01558$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.02 MGS: 1.28 DR11CMass: 2.45 DR11LOWZ: 0.61 CMB - smica\_g30\_ftl\_full\_pp: 9.67 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.21 plik\_dx11dr2\_HM\_v18\_TTT 2435.30

## 2.124 base\_plikHM\_TTTEEE\_lowTEB\_lensing\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022276	$0.02227^{+0.00031}_{-0.00030}$	$A_{143}^{\text{dust}TE}$	0.154	$0.15^{+0.10}_{-0.11}$	$z_*$	1089.95	$1089.96^{+0.55}_{-0.58}$
$\Omega_c h^2$	0.11902	$0.1191^{+0.0027}_{-0.0027}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.16}_{-0.16}$	$r_*$	144.76	$144.74^{+0.58}_{-0.59}$
$100\theta_{\text{MC}}$	1.04087	$1.04089^{+0.00062}_{-0.00062}$	$A_{217}^{\text{dust}TE}$	1.66	$1.66^{+0.50}_{-0.50}$	$100\theta_*$	1.04106	$1.04108^{+0.00061}_{-0.00061}$
$\tau$	0.0639	$0.064^{+0.027}_{-0.026}$	$c_{100}$	0.99815	$0.9981^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.905	$13.903^{+0.054}_{-0.054}$
$\ln(10^{10} A_s)$	3.0599	$3.061^{+0.050}_{-0.049}$	$c_{217}$	0.99608	$0.9960^{+0.0029}_{-0.0028}$	$z_{\text{drag}}$	1059.67	$1059.64^{+0.63}_{-0.59}$
$n_s$	0.9662	$0.9658^{+0.0093}_{-0.0092}$	$H_0$	67.60	$67.6^{+1.2}_{-1.2}$	$r_{\text{drag}}$	147.45	$147.44^{+0.57}_{-0.58}$
$y_{\text{cal}}$	0.99999	$1.0002^{+0.0047}_{-0.0047}$	$\Omega_\Lambda$	0.6894	$0.689^{+0.016}_{-0.017}$	$k_D$	0.14041	$0.14042^{+0.00063}_{-0.00060}$
$A_{217}^{\text{CIB}}$	67.8	$65^{+10}_{-10}$	$\Omega_m$	0.3106	$0.311^{+0.017}_{-0.016}$	$100\theta_D$	0.160912	$0.16092^{+0.00034}_{-0.00036}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m h^2$	0.14194	$0.1420^{+0.0025}_{-0.0025}$	$z_{\text{eq}}$	3377	$3378^{+60}_{-61}$
$A_{143}^{\text{tSZ}}$	7.31	$5.3^{+3.6}_{-3.8}$	$\Omega_m h^3$	0.09596	$0.09597^{+0.00058}_{-0.00057}$	$k_{\text{eq}}$	0.010306	$0.01031^{+0.00018}_{-0.00018}$
$A_{100}^{\text{PS}}$	258	$262^{+60}_{-60}$	$\sigma_8$	0.8150	$0.815^{+0.017}_{-0.017}$	$100\theta_{\text{eq}}$	0.8176	$0.817^{+0.012}_{-0.011}$
$A_{143}^{\text{PS}}$	38.5	$44^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4542	$0.455^{+0.013}_{-0.014}$	$100\theta_{s,\text{eq}}$	0.4517	$0.4516^{+0.0060}_{-0.0058}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6084	$0.609^{+0.013}_{-0.013}$	$r_{\text{drag}}/D_V(0.57)$	0.07163	$0.07162^{+0.00094}_{-0.00090}$
$A_{217}^{\text{PS}}$	96.5	$97^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9912	$0.992^{+0.020}_{-0.020}$	$H(0.57)$	92.98	$92.98^{+0.55}_{-0.52}$
$A^{\text{kSZ}}$	0.00	$< 8.08$	$\langle d^2 \rangle^{1/2}$	2.4528	$2.455^{+0.048}_{-0.049}$	$D_A(0.57)$	1387.8	$1388^{+16}_{-17}$
$A_{100}^{\text{dust}TT}$	7.42	$7.5^{+3.7}_{-3.6}$	$z_{\text{re}}$	8.64	$8.6^{+2.5}_{-2.6}$	$F_{\text{AP}}(0.57)$	0.67580	$0.6759^{+0.0042}_{-0.0042}$
$A_{143}^{\text{dust}TT}$	9.10	$9.0^{+3.6}_{-3.6}$	$10^9 A_s$	2.132	$2.13^{+0.11}_{-0.10}$	$f\sigma_8(0.57)$	0.4736	$0.4739^{+0.0096}_{-0.0098}$
$A_{143 \times 217}^{\text{dust}TT}$	17.7	$17.2^{+8.0}_{-8.0}$	$10^9 A_s e^{-2\tau}$	1.8765	$1.877^{+0.022}_{-0.022}$	$\sigma_8(0.57)$	0.6065	$0.607^{+0.015}_{-0.014}$
$A_{217}^{\text{dust}TT}$	81.8	$82^{+10}_{-10}$	$D_{40}$	1229.2	$1231^{+23}_{-23}$	$f_{2000}^{143}$	29.8	$30^{+5}_{-5}$
$A_{100}^{\text{dust}EE}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5723	$5726^{+75}_{-76}$	$f_{2000}^{143 \times 217}$	32.52	$33^{+4}_{-4}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0492	$0.0489^{+0.0098}_{-0.0099}$	$D_{810}$	2533.3	$2534^{+26}_{-26}$	$f_{2000}^{217}$	106.09	$106.2^{+3.6}_{-3.7}$
$A_{100 \times 217}^{\text{dust}EE}$	0.0999	$0.0999^{+0.063}_{-0.062}$	$D_{1420}$	814.7	$814.7^{+9.1}_{-9.3}$	$\chi_{\text{lensing}}^2$	9.66	$10.4 (\nu: 1.7)$
$A_{143}^{\text{dust}EE}$	0.1004	$0.101^{+0.013}_{-0.014}$	$D_{2000}$	230.07	$230.1^{+3.1}_{-3.1}$	$\chi_{\text{lowTEB}}^2$	10495.23	$10495.8 (\nu: 0.6)$
$A_{143 \times 217}^{\text{dust}EE}$	0.225	$0.224^{+0.091}_{-0.091}$	$n_{s,0.002}$	0.9662	$0.9658^{+0.0093}_{-0.0092}$	$\chi_{\text{plik}}^2$	2435.1	$2453.5 (\nu: 23.2)$
$A_{217}^{\text{dust}EE}$	0.653	$0.65^{+0.26}_{-0.25}$	$Y_P$	0.245351	$0.24535^{+0.00014}_{-0.00014}$	$\chi_{\text{JLA}}^2$	706.723	$706.79 (\nu: 0.0)$
$A_{100}^{\text{dust}TE}$	0.142	$0.141^{+0.074}_{-0.074}$	$Y_P^{\text{BBN}}$	0.246678	$0.24667^{+0.00014}_{-0.00014}$	$\chi_{\text{prior}}^2$	7.2	$19.4 (\nu: 15.0)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.056}_{-0.057}$	$10^5 D/H$	2.609	$2.610^{+0.057}_{-0.058}$	$\chi_{\text{CMB}}^2$	12940.0	$12959.7 (\nu: 22.5)$
$A_{100 \times 217}^{\text{dust}TE}$	0.304	$0.30^{+0.17}_{-0.17}$	Age/Gyr	13.8044	$13.804^{+0.049}_{-0.050}$			

Best-fit  $\chi_{\text{eff}}^2 = 13653.91$ ;  $\bar{\chi}_{\text{eff}}^2 = 13685.92$ ;  $R - 1 = 0.01520$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.66 lowl\_SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10495.24 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2435.13 SN - JLA December\_2013: 706.72

## 2.125 base\_plikHM\_TTTEEE\_lowTEB\_lensing\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022294	$0.02228^{+0.00031}_{-0.00030}$	$A_{143}^{\text{dust}TE}$	0.155	$0.15^{+0.10}_{-0.11}$	$z_*$	1089.92	$1089.95^{+0.56}_{-0.58}$
$\Omega_c h^2$	0.11896	$0.1190^{+0.0027}_{-0.0027}$	$A_{143 \times 217}^{\text{dust}TE}$	0.339	$0.34^{+0.16}_{-0.16}$	$r_*$	144.76	$144.75^{+0.59}_{-0.60}$
$100\theta_{\text{MC}}$	1.04089	$1.04090^{+0.00062}_{-0.00062}$	$A_{217}^{\text{dust}TE}$	1.67	$1.66^{+0.50}_{-0.50}$	$100\theta_*$	1.04108	$1.04109^{+0.00062}_{-0.00061}$
$\tau$	0.0649	$0.064^{+0.027}_{-0.026}$	$c_{100}$	0.99816	$0.9981^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.905	$13.904^{+0.054}_{-0.055}$
$\ln(10^{10} A_s)$	3.0617	$3.061^{+0.050}_{-0.049}$	$c_{217}$	0.99602	$0.9960^{+0.0029}_{-0.0028}$	$z_{\text{drag}}$	1059.67	$1059.65^{+0.62}_{-0.60}$
$n_s$	0.9665	$0.9660^{+0.0094}_{-0.0093}$	$H_0$	67.65	$67.6^{+1.3}_{-1.2}$	$r_{\text{drag}}$	147.45	$147.45^{+0.58}_{-0.59}$
$y_{\text{cal}}$	0.99997	$1.0002^{+0.0047}_{-0.0047}$	$\Omega_\Lambda$	0.6899	$0.689^{+0.017}_{-0.017}$	$k_D$	0.14043	$0.14042^{+0.00063}_{-0.00061}$
$A_{217}^{\text{CIB}}$	67.7	$65^{+10}_{-10}$	$\Omega_m$	0.3101	$0.311^{+0.017}_{-0.017}$	$100\theta_D$	0.160893	$0.16091^{+0.00034}_{-0.00036}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m h^2$	0.14190	$0.1420^{+0.0025}_{-0.0026}$	$z_{\text{eq}}$	3375	$3377^{+61}_{-61}$
$A_{143}^{\text{tSZ}}$	7.38	$5.3^{+3.6}_{-3.8}$	$\Omega_m h^3$	0.09599	$0.09597^{+0.00058}_{-0.00057}$	$k_{\text{eq}}$	0.010302	$0.01031^{+0.00019}_{-0.00019}$
$A_{100}^{\text{PS}}$	256	$262^{+60}_{-60}$	$\sigma_8$	0.8155	$0.815^{+0.017}_{-0.017}$	$100\theta_{\text{eq}}$	0.8179	$0.818^{+0.012}_{-0.011}$
$A_{143}^{\text{PS}}$	38.1	$44^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4541	$0.454^{+0.013}_{-0.014}$	$100\theta_{s,\text{eq}}$	0.4518	$0.4517^{+0.0061}_{-0.0059}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6085	$0.609^{+0.013}_{-0.013}$	$r_{\text{drag}}/D_V(0.57)$	0.07165	$0.07164^{+0.00095}_{-0.00091}$
$A_{217}^{\text{PS}}$	96.4	$97^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9915	$0.992^{+0.020}_{-0.020}$	$H(0.57)$	93.01	$93.00^{+0.56}_{-0.52}$
$A^{\text{kSZ}}$	0.00	$< 8.07$	$\langle d^2 \rangle^{1/2}$	2.4537	$2.455^{+0.048}_{-0.049}$	$D_A(0.57)$	1387.2	$1388^{+16}_{-17}$
$A_{100}^{\text{dust}TT}$	7.45	$7.5^{+3.7}_{-3.6}$	$z_{\text{re}}$	8.73	$8.6^{+2.5}_{-2.6}$	$F_{\text{AP}}(0.57)$	0.67567	$0.6758^{+0.0043}_{-0.0042}$
$A_{143}^{\text{dust}TT}$	9.07	$9.0^{+3.6}_{-3.6}$	$10^9 A_s$	2.136	$2.14^{+0.11}_{-0.10}$	$f\sigma_8(0.57)$	0.4738	$0.4738^{+0.0096}_{-0.0098}$
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.2^{+8.0}_{-8.0}$	$10^9 A_s e^{-2\tau}$	1.8763	$1.877^{+0.023}_{-0.022}$	$\sigma_8(0.57)$	0.6070	$0.607^{+0.015}_{-0.014}$
$A_{217}^{\text{dust}TT}$	81.7	$82^{+10}_{-10}$	$D_{40}$	1229.0	$1231^{+24}_{-23}$	$f_{2000}^{143}$	29.6	$30^{+5}_{-5}$
$A_{100}^{\text{dust}EE}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5724	$5726^{+74}_{-76}$	$f_{2000}^{143 \times 217}$	32.37	$33^{+4}_{-4}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0492	$0.0490^{+0.0098}_{-0.0099}$	$D_{810}$	2533.4	$2534^{+26}_{-26}$	$f_{2000}^{217}$	105.94	$106.2^{+3.6}_{-3.7}$
$A_{100 \times 217}^{\text{dust}EE}$	0.0999	$0.0999^{+0.063}_{-0.062}$	$D_{1420}$	814.9	$814.8^{+9.1}_{-9.3}$	$\chi_{\text{lensing}}^2$	9.73	$10.4 (\nu: 1.7)$
$A_{143}^{\text{dust}EE}$	0.1002	$0.101^{+0.013}_{-0.014}$	$D_{2000}$	230.17	$230.1^{+3.1}_{-3.1}$	$\chi_{\text{lowTEB}}^2$	10495.23	$10495.8 (\nu: 0.6)$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.224^{+0.091}_{-0.091}$	$n_{s,0.002}$	0.9665	$0.9660^{+0.0094}_{-0.0093}$	$\chi_{\text{plik}}^2$	2435.1	$2453.6 (\nu: 23.3)$
$A_{217}^{\text{dust}EE}$	0.649	$0.65^{+0.26}_{-0.25}$	$Y_P$	0.245359	$0.24535^{+0.00014}_{-0.00014}$	$\chi_{\text{H070p6}}^2$	0.79	$0.84 (\nu: 0.1)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.074}_{-0.073}$	$Y_P^{\text{BBN}}$	0.246686	$0.24668^{+0.00014}_{-0.00014}$	$\chi_{\text{prior}}^2$	7.2	$19.4 (\nu: 15.0)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.056}_{-0.057}$	$10^5 D/H$	2.606	$2.609^{+0.057}_{-0.059}$	$\chi_{\text{CMB}}^2$	12940.0	$12959.8 (\nu: 22.6)$
$A_{100 \times 217}^{\text{dust}TE}$	0.305	$0.30^{+0.17}_{-0.17}$	Age/Gyr	13.8017	$13.803^{+0.049}_{-0.050}$			

Best-fit  $\chi_{\text{eff}}^2 = 12948.00$ ;  $\bar{\chi}_{\text{eff}}^2 = 12980.00$ ;  $R - 1 = 0.01547$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.72 lowl\_SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10495.23 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2435.07 Hubble - H070p6: 0.79

## 2.126 base\_plikHM\_TTTEEE\_lowTEB\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022307	$0.02230^{+0.00027}_{-0.00026}$	$A_{217}^{\text{dust}TE}$	1.646	$1.66^{+0.50}_{-0.50}$	$z_{\text{drag}}$	1059.70	$1059.68^{+0.60}_{-0.57}$
$\Omega_c h^2$	0.11865	$0.1188^{+0.0020}_{-0.0021}$	$c_{100}$	0.99816	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.518	$147.50^{+0.47}_{-0.48}$
$100\theta_{\text{MC}}$	1.04094	$1.04093^{+0.00059}_{-0.00058}$	$c_{217}$	0.99606	$0.9960^{+0.0029}_{-0.0028}$	$k_D$	0.14037	$0.14038^{+0.00057}_{-0.00055}$
$\tau$	0.0677	$0.066^{+0.024}_{-0.024}$	$H_0$	67.78	$67.74^{+0.93}_{-0.90}$	$100\theta_D$	0.160891	$0.16090^{+0.00033}_{-0.00034}$
$\ln(10^{10} A_s)$	3.0665	$3.064^{+0.045}_{-0.045}$	$\Omega_\Lambda$	0.6918	$0.691^{+0.012}_{-0.012}$	$z_{\text{eq}}$	3368.4	$3371^{+45}_{-46}$
$n_s$	0.9672	$0.9667^{+0.0079}_{-0.0078}$	$\Omega_m$	0.3082	$0.309^{+0.012}_{-0.012}$	$k_{\text{eq}}$	0.010281	$0.01029^{+0.00014}_{-0.00014}$
$y_{\text{cal}}$	0.99993	$1.0002^{+0.0047}_{-0.0047}$	$\Omega_m h^2$	0.14160	$0.1417^{+0.0019}_{-0.0019}$	$100\theta_{\text{eq}}$	0.8192	$0.8188^{+0.0089}_{-0.0086}$
$A_{217}^{\text{CIB}}$	67.6	$65^{+10}_{-10}$	$\Omega_m h^3$	0.09598	$0.09598^{+0.00058}_{-0.00057}$	$100\theta_{s,\text{eq}}$	0.45252	$0.4523^{+0.0045}_{-0.0044}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$\sigma_8$	0.8166	$0.816^{+0.017}_{-0.017}$	$r_{\text{drag}}/D_V(0.57)$	0.07176	$0.07173^{+0.00070}_{-0.00067}$
$A_{143}^{\text{tSZ}}$	7.33	$5.3^{+3.6}_{-3.7}$	$\sigma_8 \Omega_m^{0.5}$	0.4534	$0.453^{+0.012}_{-0.012}$	$H(0.57)$	93.062	$93.04^{+0.43}_{-0.41}$
$A_{100}^{\text{PS}}$	257	$261^{+60}_{-60}$	$\sigma_8 \Omega_m^{0.25}$	0.6085	$0.608^{+0.013}_{-0.013}$	$D_A(0.57)$	1385.4	$1386^{+12}_{-12}$
$A_{143}^{\text{PS}}$	38.3	$43^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9919	$0.991^{+0.020}_{-0.020}$	$F_{\text{AP}}(0.57)$	0.67519	$0.6754^{+0.0031}_{-0.0031}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4549	$2.454^{+0.048}_{-0.048}$	$f\sigma_8(0.57)$	0.4740	$0.4737^{+0.0097}_{-0.0098}$
$A_{217}^{\text{PS}}$	96.4	$96^{+20}_{-20}$	$z_{\text{re}}$	8.99	$8.8^{+2.2}_{-2.4}$	$\sigma_8(0.57)$	0.6083	$0.608^{+0.014}_{-0.013}$
$A^{\text{kSZ}}$	0.00	$< 8.02$	$10^9 A_s$	2.147	$2.142^{+0.098}_{-0.095}$	$f_{2000}^{143}$	29.6	$30^{+5}_{-5}$
$A_{100}^{\text{dust}TT}$	7.43	$7.5^{+3.8}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8749	$1.876^{+0.021}_{-0.021}$	$f_{2000}^{143 \times 217}$	32.36	$32.6^{+3.6}_{-3.7}$
$A_{143}^{\text{dust}TT}$	9.01	$9.0^{+3.6}_{-3.6}$	$D_{40}$	1228.2	$1230^{+22}_{-22}$	$f_{2000}^{217}$	105.88	$106.1^{+3.5}_{-3.6}$
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.2^{+8.0}_{-8.0}$	$D_{220}$	5724	$5728^{+75}_{-74}$	$\chi^2_{\text{lensing}}$	9.75	$10.3 (\nu: 1.6)$
$A_{217}^{\text{dust}TT}$	81.9	$82^{+10}_{-10}$	$D_{810}$	2532.8	$2534^{+26}_{-26}$	$\chi^2_{\text{lowTEB}}$	10495.22	$10495.6 (\nu: 0.5)$
$A_{100}^{\text{dust}EE}$	0.0814	$0.082^{+0.011}_{-0.011}$	$D_{1420}$	814.8	$814.9^{+9.1}_{-9.2}$	$\chi^2_{\text{plik}}$	2435.2	$2453.5 (\nu: 22.8)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0493	$0.0491^{+0.0097}_{-0.0098}$	$D_{2000}$	230.23	$230.2^{+3.0}_{-3.0}$	$\chi^2_{\text{H070p6}}$	0.719	$0.76 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.0999^{+0.064}_{-0.062}$	$n_{s,0.002}$	0.9672	$0.9667^{+0.0079}_{-0.0078}$	$\chi^2_{\text{JLA}}$	706.661	$706.71 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1006	$0.101^{+0.013}_{-0.014}$	$Y_P$	0.245365	$0.24536^{+0.00012}_{-0.00012}$	$\chi^2_{6\text{DF}}$	0.010	$0.040 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.224^{+0.091}_{-0.091}$	$Y_P^{\text{BBN}}$	0.246692	$0.24669^{+0.00012}_{-0.00012}$	$\chi^2_{\text{MGS}}$	1.41	$1.42 (\nu: 0.1)$
$A_{217}^{\text{dust}EE}$	0.654	$0.65^{+0.26}_{-0.26}$	$10^5 D/H$	2.603	$2.605^{+0.050}_{-0.052}$	$\chi^2_{\text{DR11CMass}}$	2.41	$2.71 (\nu: 0.1)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.075}_{-0.074}$	Age/Gyr	13.7976	$13.799^{+0.041}_{-0.041}$	$\chi^2_{\text{DR11LOWZ}}$	0.48	$0.61 (\nu: 0.1)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.056}_{-0.057}$	$z_*$	1089.880	$1089.90^{+0.45}_{-0.46}$	$\chi^2_{\text{prior}}$	7.2	$19.4 (\nu: 14.8)$
$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.17}_{-0.17}$	$r_*$	144.829	$144.81^{+0.46}_{-0.47}$	$\chi^2_{\text{CMB}}$	12940.2	$12959.4 (\nu: 22.1)$
$A_{143}^{\text{dust}TE}$	0.153	$0.15^{+0.10}_{-0.11}$	$100\theta_*$	1.04113	$1.04112^{+0.00058}_{-0.00057}$	$\chi^2_{\text{BAO}}$	4.31	$4.79 (\nu: 0.2)$
$A_{143 \times 217}^{\text{dust}TE}$	0.335	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.9108	$13.909^{+0.043}_{-0.045}$			

Best-fit  $\chi^2_{\text{eff}} = 13659.04$ ;  $\bar{\chi}^2_{\text{eff}} = 13691.10$ ;  $R - 1 = 0.01658$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.41 DR11LOWZ: 0.48 CMB - smica\_g30\_ftl\_full\_pp: 9.75 lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.22 plik\_dx11dr2\_HM\_v18\_TTT

**2.127 base\_plikHM\_TTTEEE\_lowTEB\_lensing\_post\_zre6p5**

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02227^{+0.00031}_{-0.00029}$	$A_{143}^{\text{dust}TE}$	$0.15^{+0.10}_{-0.11}$	$z_*$	$1089.97^{+0.54}_{-0.57}$
$\Omega_c h^2$	$0.1191^{+0.0026}_{-0.0027}$	$A_{143 \times 217}^{\text{dust}TE}$	$0.34^{+0.16}_{-0.16}$	$r_*$	$144.74^{+0.58}_{-0.57}$
$100\theta_{\text{MC}}$	$1.04088^{+0.00062}_{-0.00062}$	$A_{217}^{\text{dust}TE}$	$1.66^{+0.50}_{-0.50}$	$100\theta_*$	$1.04108^{+0.00061}_{-0.00061}$
$\tau$	$0.065^{+0.023}_{-0.023}$	$c_{100}$	$0.9981^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	$13.903^{+0.054}_{-0.053}$
$\ln(10^{10} A_s)$	$3.062^{+0.044}_{-0.042}$	$c_{217}$	$0.9960^{+0.0029}_{-0.0028}$	$z_{\text{drag}}$	$1059.63^{+0.62}_{-0.58}$
$n_s$	$0.9657^{+0.0092}_{-0.0090}$	$H_0$	$67.6^{+1.2}_{-1.2}$	$r_{\text{drag}}$	$147.44^{+0.57}_{-0.56}$
$y_{\text{cal}}$	$1.0001^{+0.0046}_{-0.0048}$	$\Omega_\Lambda$	$0.689^{+0.016}_{-0.016}$	$k_D$	$0.14042^{+0.00062}_{-0.00060}$
$A_{217}^{\text{CIB}}$	$65^{+10}_{-10}$	$\Omega_m$	$0.311^{+0.016}_{-0.016}$	$100\theta_D$	$0.16092^{+0.00035}_{-0.00036}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\Omega_m h^2$	$0.1420^{+0.0024}_{-0.0025}$	$z_{\text{eq}}$	$3379^{+58}_{-60}$
$A_{143}^{\text{tSZ}}$	$5.3^{+3.9}_{-3.7}$	$\Omega_m h^3$	$0.09596^{+0.00058}_{-0.00057}$	$k_{\text{eq}}$	$0.01031^{+0.00018}_{-0.00018}$
$A_{100}^{\text{PS}}$	$262^{+60}_{-60}$	$\sigma_8$	$0.816^{+0.016}_{-0.015}$	$100\theta_{\text{eq}}$	$0.817^{+0.012}_{-0.011}$
$A_{143}^{\text{PS}}$	$44^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.013}_{-0.014}$	$100\theta_{\text{s,eq}}$	$0.4515^{+0.0060}_{-0.0056}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.013}_{-0.013}$	$r_{\text{drag}}/D_V(0.57)$	$0.07160^{+0.00094}_{-0.00087}$
$A_{217}^{\text{PS}}$	$97^{+20}_{-20}$	$\sigma_8/h^{0.5}$	$0.993^{+0.019}_{-0.019}$	$H(0.57)$	$92.97^{+0.55}_{-0.50}$
$A^{\text{kSZ}}$	$< 8.08$	$\langle d^2 \rangle^{1/2}$	$2.458^{+0.046}_{-0.046}$	$D_A(0.57)$	$1388^{+16}_{-17}$
$A_{100}^{\text{dust}TT}$	$7.5^{+3.7}_{-3.6}$	$z_{\text{re}}$	$< 10.6$	$F_{\text{AP}}(0.57)$	$0.6760^{+0.0041}_{-0.0042}$
$A_{143}^{\text{dust}TT}$	$9.0^{+3.6}_{-3.6}$	$10^9 A_s$	$2.138^{+0.094}_{-0.090}$	$f\sigma_8(0.57)$	$0.4744^{+0.0092}_{-0.0092}$
$A_{143 \times 217}^{\text{dust}TT}$	$17.2^{+8.1}_{-8.0}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.022}_{-0.022}$	$\sigma_8(0.57)$	$0.607^{+0.013}_{-0.012}$
$A_{217}^{\text{dust}TT}$	$82^{+10}_{-10}$	$D_{40}$	$1231^{+23}_{-23}$	$f_{2000}^{143}$	$30^{+5}_{-5}$
$A_{100}^{\text{dust}EE}$	$0.081^{+0.011}_{-0.011}$	$D_{220}$	$5725^{+75}_{-76}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A_{100 \times 143}^{\text{dust}EE}$	$0.0489^{+0.0098}_{-0.0099}$	$D_{810}$	$2534^{+26}_{-26}$	$f_{2000}^{217}$	$106.2^{+3.6}_{-3.6}$
$A_{100 \times 217}^{\text{dust}EE}$	$0.0998^{+0.064}_{-0.062}$	$D_{1420}$	$814.6^{+9.0}_{-9.2}$	$\chi^2_{\text{lensing}}$	$10.5 (\nu: 1.8)$
$A_{143}^{\text{dust}EE}$	$0.101^{+0.013}_{-0.014}$	$D_{2000}$	$230.0^{+3.1}_{-3.1}$	$\chi^2_{\text{lowTEB}}$	$10495.8 (\nu: 0.6)$
$A_{143 \times 217}^{\text{dust}EE}$	$0.225^{+0.091}_{-0.091}$	$n_{\text{s},0.002}$	$0.9657^{+0.0092}_{-0.0090}$	$\chi^2_{\text{plik}}$	$2453.3 (\nu: 22.8)$
$A_{217}^{\text{dust}EE}$	$0.65^{+0.26}_{-0.25}$	$Y_{\text{P}}$	$0.24535^{+0.00014}_{-0.00014}$	$\chi^2_{\text{prior}}$	$19.4 (\nu: 15.0)$
$A_{100}^{\text{dust}TE}$	$0.141^{+0.073}_{-0.073}$	$Y_{\text{BBN}}$	$0.24667^{+0.00014}_{-0.00014}$	$\chi^2_{\text{CMB}}$	$12959.6 (\nu: 22.1)$
$A_{100 \times 143}^{\text{dust}TE}$	$0.132^{+0.056}_{-0.057}$	$10^5 \text{D/H}$	$2.611^{+0.056}_{-0.057}$		
$A_{100 \times 217}^{\text{dust}TE}$	$0.30^{+0.16}_{-0.17}$	$\text{Age/Gyr}$	$13.805^{+0.048}_{-0.049}$		

$$\bar{\chi}^2_{\text{eff}} = 12978.93; R - 1 = 0.01449$$



## 2.128 base\_plikHM\_TTTEEE\_lowTEB\_lensing\_post\_BAO\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02228^{+0.00027}_{-0.00027}$	$A_{143 \times 217}^{\text{dustTE}}$	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	$1.04110^{+0.00058}_{-0.00057}$
$\Omega_c h^2$	$0.1189^{+0.0020}_{-0.0020}$	$A_{217}^{\text{dustTE}}$	$1.66^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	$13.907^{+0.044}_{-0.045}$
$100\theta_{\text{MC}}$	$1.04091^{+0.00059}_{-0.00058}$	$c_{100}$	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	$1059.65^{+0.60}_{-0.55}$
$\tau$	$0.066^{+0.022}_{-0.022}$	$c_{217}$	$0.9960^{+0.0029}_{-0.0028}$	$r_{\text{drag}}$	$147.48^{+0.47}_{-0.49}$
$\ln(10^{10} A_s)$	$3.064^{+0.042}_{-0.041}$	$H_0$	$67.66^{+0.93}_{-0.89}$	$k_D$	$0.14039^{+0.00057}_{-0.00055}$
$n_s$	$0.9663^{+0.0078}_{-0.0078}$	$\Omega_\Lambda$	$0.690^{+0.012}_{-0.012}$	$100\theta_D$	$0.16091^{+0.00033}_{-0.00034}$
$y_{\text{cal}}$	$1.0001^{+0.0047}_{-0.0047}$	$\Omega_m$	$0.310^{+0.012}_{-0.012}$	$z_{\text{eq}}$	$3374^{+46}_{-46}$
$A_{217}^{\text{CIB}}$	$65^{+10}_{-10}$	$\Omega_m h^2$	$0.1418^{+0.0019}_{-0.0019}$	$k_{\text{eq}}$	$0.01030^{+0.00014}_{-0.00014}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\Omega_m h^3$	$0.09597^{+0.00058}_{-0.00058}$	$100\theta_{\text{eq}}$	$0.8181^{+0.0088}_{-0.0085}$
$A_{143}^{\text{tSZ}}$	$5.3^{+3.6}_{-3.7}$	$\sigma_8$	$0.816^{+0.016}_{-0.016}$	$100\theta_{\text{s,eq}}$	$0.4520^{+0.0045}_{-0.0044}$
$A_{100}^{\text{PS}}$	$262^{+60}_{-60}$	$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.012}_{-0.012}$	$r_{\text{drag}}/D_V(0.57)$	$0.07167^{+0.00069}_{-0.00067}$
$A_{143}^{\text{PS}}$	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.013}_{-0.012}$	$H(0.57)$	$93.01^{+0.43}_{-0.41}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$\sigma_8/h^{0.5}$	$0.992^{+0.020}_{-0.019}$	$D_A(0.57)$	$1387^{+12}_{-12}$
$A_{217}^{\text{PS}}$	$97^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	$2.456^{+0.047}_{-0.045}$	$F_{\text{AP}}(0.57)$	$0.6756^{+0.0031}_{-0.0031}$
$A^{\text{kSZ}}$	$< 8.07$	$z_{\text{re}}$	$8.8^{+1.9}_{-2.2}$	$f\sigma_8(0.57)$	$0.4741^{+0.0094}_{-0.0090}$
$A_{100}^{\text{dustTT}}$	$7.5^{+3.8}_{-3.6}$	$10^9 A_s$	$2.142^{+0.090}_{-0.088}$	$\sigma_8(0.57)$	$0.608^{+0.013}_{-0.012}$
$A_{143}^{\text{dustTT}}$	$9.1^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.021}_{-0.021}$	$f_{2000}^{143}$	$30^{+5}_{-5}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.2^{+8.0}_{-8.0}$	$D_{40}$	$1230^{+22}_{-22}$	$f_{2000}^{143 \times 217}$	$32.6^{+3.6}_{-3.7}$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$D_{220}$	$5726^{+75}_{-75}$	$f_{2000}^{217}$	$106.1^{+3.6}_{-3.6}$
$A_{100}^{\text{dustEE}}$	$0.081^{+0.011}_{-0.011}$	$D_{810}$	$2534^{+26}_{-26}$	$\chi_{\text{lensing}}^2$	$10.4 (\nu: 1.7)$
$A_{100 \times 143}^{\text{dustEE}}$	$0.0490^{+0.0096}_{-0.0097}$	$D_{1420}$	$814.7^{+9.1}_{-9.2}$	$\chi_{\text{lowTEB}}^2$	$10495.7 (\nu: 0.5)$
$A_{100 \times 217}^{\text{dustEE}}$	$0.0999^{+0.064}_{-0.062}$	$D_{2000}$	$230.1^{+3.0}_{-3.0}$	$\chi_{\text{plik}}^2$	$2453.2 (\nu: 22.6)$
$A_{143}^{\text{dustEE}}$	$0.101^{+0.013}_{-0.014}$	$n_{\text{s},0.002}$	$0.9663^{+0.0078}_{-0.0078}$	$\chi_{6\text{DF}}^2$	$0.047 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustEE}}$	$0.225^{+0.090}_{-0.091}$	$Y_{\text{P}}$	$0.24535^{+0.00012}_{-0.00013}$	$\chi_{\text{MGS}}^2$	$1.35 (\nu: 0.1)$
$A_{217}^{\text{dustEE}}$	$0.65^{+0.26}_{-0.26}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24668^{+0.00012}_{-0.00013}$	$\chi_{\text{DR11CMass}}^2$	$2.74 (\nu: 0.1)$
$A_{100}^{\text{dustTE}}$	$0.141^{+0.074}_{-0.074}$	$10^5 D/H$	$2.608^{+0.051}_{-0.051}$	$\chi_{\text{DR11LOWZ}}^2$	$0.68 (\nu: 0.1)$
$A_{100 \times 143}^{\text{dustTE}}$	$0.132^{+0.056}_{-0.057}$	$\text{Age/Gyr}$	$13.802^{+0.041}_{-0.042}$	$\chi_{\text{prior}}^2$	$19.4 (\nu: 14.8)$
$A_{100 \times 217}^{\text{dustTE}}$	$0.30^{+0.17}_{-0.17}$	$z_*$	$1089.94^{+0.45}_{-0.46}$	$\chi_{\text{CMB}}^2$	$12959.3 (\nu: 21.9)$
$A_{143}^{\text{dustTE}}$	$0.15^{+0.10}_{-0.11}$	$r_*$	$144.78^{+0.46}_{-0.47}$	$\chi_{\text{BAO}}^2$	$4.82 (\nu: 0.2)$

$$\bar{\chi}_{\text{eff}}^2 = 12983.50; R - 1 = 0.01640$$

## 2.129 base\_plikHM\_TTTEEE\_lowTEB\_lensing\_post\_reion

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022219	$0.02222^{+0.00029}_{-0.00029}$	$A_{143}^{\text{dustTE}}$	0.155	$0.16^{+0.11}_{-0.11}$	$z_*$	1090.10	$1090.09^{+0.50}_{-0.50}$
$\Omega_c h^2$	0.11991	$0.1198^{+0.0023}_{-0.0024}$	$A_{143 \times 217}^{\text{dustTE}}$	0.339	$0.34^{+0.16}_{-0.16}$	$r_*$	144.57	$144.59^{+0.52}_{-0.51}$
$100\theta_{\text{MC}}$	1.04078	$1.04079^{+0.00061}_{-0.00059}$	$A_{217}^{\text{dustTE}}$	1.67	$1.67^{+0.50}_{-0.50}$	$100\theta_*$	1.04097	$1.04099^{+0.00060}_{-0.00058}$
$\tau$	0.0529	$0.055^{+0.014}_{-0.013}$	$c_{100}$	0.99813	$0.9981^{+0.0015}_{-0.0016}$	$D_A/\text{Gpc}$	13.8880	$13.890^{+0.050}_{-0.048}$
$\ln(10^{10} A_s)$	3.0405	$3.044^{+0.027}_{-0.025}$	$c_{217}$	0.99611	$0.9961^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.59	$1059.58^{+0.59}_{-0.58}$
$n_s$	0.9638	$0.9636^{+0.0079}_{-0.0081}$	$H_0$	67.21	$67.3^{+1.1}_{-1.0}$	$r_{\text{drag}}$	147.28	$147.31^{+0.52}_{-0.52}$
$y_{\text{cal}}$	1.00021	$1.0003^{+0.0047}_{-0.0048}$	$\Omega_\Lambda$	0.6839	$0.684^{+0.014}_{-0.014}$	$k_D$	0.14055	$0.14052^{+0.00059}_{-0.00059}$
$A_{217}^{\text{CIB}}$	68.1	$65^{+10}_{-10}$	$\Omega_m$	0.3161	$0.316^{+0.014}_{-0.014}$	$100\theta_D$	0.160949	$0.16095^{+0.00035}_{-0.00034}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m h^2$	0.14277	$0.1427^{+0.0022}_{-0.0022}$	$z_{\text{eq}}$	3396	$3394^{+52}_{-53}$
$A_{143}^{\text{tSZ}}$	7.26	$5.3^{+3.6}_{-3.7}$	$\Omega_m h^3$	0.09596	$0.09596^{+0.00058}_{-0.00057}$	$k_{\text{eq}}$	0.010366	$0.01036^{+0.00016}_{-0.00016}$
$A_{100}^{\text{PS}}$	258	$264^{+50}_{-50}$	$\sigma_8$	0.8095	$0.810^{+0.012}_{-0.010}$	$100\theta_{\text{eq}}$	0.8138	$0.814^{+0.010}_{-0.0096}$
$A_{143}^{\text{PS}}$	39.7	$45^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4551	$0.455^{+0.013}_{-0.014}$	$100\theta_{s,\text{eq}}$	0.4498	$0.4500^{+0.0052}_{-0.0050}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6070	$0.607^{+0.012}_{-0.013}$	$r_{\text{drag}}/D_V(0.57)$	0.07133	$0.07136^{+0.00080}_{-0.00076}$
$A_{217}^{\text{PS}}$	96.7	$97^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9874	$0.988^{+0.017}_{-0.017}$	$H(0.57)$	92.828	$92.85^{+0.47}_{-0.45}$
$A^{\text{kSZ}}$	0.0	—	$\langle d^2 \rangle^{1/2}$	2.4434	$2.447^{+0.040}_{-0.042}$	$D_A(0.57)$	1393.0	$1392^{+14}_{-14}$
$A_{100}^{\text{dustTT}}$	7.46	$7.5^{+3.7}_{-3.6}$	$z_{\text{re}}$	7.57	$< 8.94$	$F_{\text{AP}}(0.57)$	0.67718	$0.6770^{+0.0036}_{-0.0037}$
$A_{143}^{\text{dustTT}}$	9.11	$9.1^{+3.6}_{-3.4}$	$10^9 A_s$	2.092	$2.099^{+0.057}_{-0.053}$	$f\sigma_8(0.57)$	0.4718	$0.4722^{+0.0080}_{-0.0083}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.3^{+8.1}_{-7.9}$	$10^9 A_s e^{-2\tau}$	1.8817	$1.882^{+0.020}_{-0.021}$	$\sigma_8(0.57)$	0.6011	$0.6019^{+0.0083}_{-0.0077}$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$D_{40}$	1232.0	$1233^{+23}_{-23}$	$f_{2000}^{143}$	30.3	$31^{+5}_{-5}$
$A_{100}^{\text{dustEE}}$	0.0810	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5725	$5728^{+76}_{-77}$	$f_{2000}^{143 \times 217}$	32.94	$33.1^{+3.6}_{-3.6}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0488	$0.0487^{+0.0098}_{-0.010}$	$D_{810}$	2536.2	$2536^{+26}_{-25}$	$f_{2000}^{217}$	106.43	$106.6^{+3.6}_{-3.6}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.0997^{+0.063}_{-0.062}$	$D_{1420}$	815.0	$814.7^{+9.2}_{-9.3}$	$\chi_{\text{lensing}}^2$	9.26	$9.8 (\nu: 0.8)$
$A_{143}^{\text{dustEE}}$	0.0999	$0.100^{+0.013}_{-0.014}$	$D_{2000}$	229.88	$229.8^{+3.1}_{-3.1}$	$\chi_{\text{lowTEB}}^2$	10495.58	$10495.80 (\nu: 0.5)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.226^{+0.089}_{-0.091}$	$n_{s,0.002}$	0.9638	$0.9636^{+0.0079}_{-0.0081}$	$\chi_{\text{plik}}^2$	2435.9	$2453.8 (\nu: 21.9)$
$A_{217}^{\text{dustEE}}$	0.651	$0.65^{+0.25}_{-0.25}$	$Y_P$	0.245326	$0.24532^{+0.00013}_{-0.00013}$	$\chi_{\text{prior}}^2$	7.4	$20 (\nu: 16.0)$
$A_{100}^{\text{dustTE}}$	0.142	$0.141^{+0.073}_{-0.076}$	$Y_P^{\text{BBN}}$	0.246652	$0.24665^{+0.00013}_{-0.00013}$	$\chi_{\text{CMB}}^2$	12940.7	$12959.4 (\nu: 21.3)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.132^{+0.056}_{-0.057}$	$10^5 D/H$	2.620	$2.620^{+0.055}_{-0.054}$			
$A_{100 \times 217}^{\text{dustTE}}$	0.301	$0.30^{+0.16}_{-0.17}$	Age/Gyr	13.8168	$13.815^{+0.044}_{-0.045}$			

Best-fit  $\chi_{\text{eff}}^2 = 12948.08$ ;  $\bar{\chi}_{\text{eff}}^2 = 12979.66$ ;  $R - 1 = 0.01869$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.26 lowl\_SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10495.58 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2435.85

### 2.130 base\_CamSpecHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022221	$0.02226^{+0.00046}_{-0.00044}$ (+0.0 $\sigma$ )	$H_0$	67.76	$67.9^{+1.8}_{-1.7}$ (+0.1 $\sigma$ )	$100\theta_*$	1.04124	$1.04127^{+0.00091}_{-0.00086}$ (+0.1 $\sigma$ )
$\Omega_c h^2$	0.11859	$0.1184^{+0.0038}_{-0.0038}$ (-0.1 $\sigma$ )	$\Omega_\Lambda$	0.6919	$0.693^{+0.023}_{-0.024}$ (+0.1 $\sigma$ )	$z_{\text{drag}}$	1059.47	$1059.56^{+0.94}_{-0.89}$ (-0.0 $\sigma$ )
$100\theta_{\text{MC}}$	1.04104	$1.04106^{+0.00093}_{-0.00088}$ (+0.1 $\sigma$ )	$\Omega_m$	0.3081	$0.307^{+0.024}_{-0.023}$ (-0.1 $\sigma$ )	$r_{\text{drag}}$	147.63	$147.63^{+0.85}_{-0.84}$ (+0.1 $\sigma$ )
$\tau$	0.0675	$0.069^{+0.033}_{-0.032}$ (+0.2 $\sigma$ )	$\Omega_m h^2$	0.14146	$0.1414^{+0.0035}_{-0.0036}$ (-0.1 $\sigma$ )	$k_D$	0.14020	$0.14024^{+0.00092}_{-0.00092}$ (-0.0 $\sigma$ )
$\ln(10^{10} A_s)$	3.063	$3.066^{+0.059}_{-0.058}$ (+0.1 $\sigma$ )	$\Omega_m h^3$	0.09586	$0.09592^{+0.00090}_{-0.00087}$ (+0.0 $\sigma$ )	$100\theta_D$	0.16101	$0.16096^{+0.00051}_{-0.00051}$ (-0.1 $\sigma$ )
$n_s$	0.9683	$0.970^{+0.012}_{-0.012}$ (+0.3 $\sigma$ )	$\sigma_8$	0.8161	$0.817^{+0.018}_{-0.018}$ (+0.2 $\sigma$ )	$z_{\text{eq}}$	3365	$3362^{+85}_{-85}$ (-0.1 $\sigma$ )
$y_{\text{cal}}$	1.00026	$1.0002^{+0.0050}_{-0.0048}$ (+0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4530	$0.453^{+0.017}_{-0.017}$ (+0.1 $\sigma$ )	$100\theta_{\text{eq}}$	0.8197	$0.820^{+0.017}_{-0.016}$ (+0.1 $\sigma$ )
$A_{100}^{\text{PS}}$	253.0	$247^{+40}_{-40}$ (-0.5 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6080	$0.608^{+0.015}_{-0.014}$ (+0.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07179	$0.0719^{+0.0014}_{-0.0013}$ (+0.1 $\sigma$ )
$A_{143}^{\text{PS}}$	35.6	$39^{+20}_{-10}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	0.9914	$0.992^{+0.021}_{-0.021}$ (+0.2 $\sigma$ )	$H(0.57)$	93.03	$93.09^{+0.83}_{-0.82}$ (+0.1 $\sigma$ )
$A_{217}^{\text{PS}}$	94.0	$97^{+30}_{-30}$ (+0.1 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.4484	$2.447^{+0.049}_{-0.049}$ (-0.0 $\sigma$ )	$D_A(0.57)$	1385.9	$1384^{+24}_{-24}$ (-0.1 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.6	$47^{+10}_{-10}$ (-2.7 $\sigma$ )	$z_{\text{re}}$	8.99	$9.0^{+3.1}_{-3.1}$ (+0.2 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6752	$0.6749^{+0.0060}_{-0.0059}$ (-0.1 $\sigma$ )
$A_{143}^{\text{tSZ}}$	2.55	< 6.61 (-1.0 $\sigma$ )	$10^9 A_s$	2.140	$2.15^{+0.13}_{-0.12}$ (+0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4736	$0.474^{+0.010}_{-0.010}$ (+0.2 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.389	$0.51^{+0.23}_{-0.20}$	$10^9 A_s e^{-2\tau}$	1.8701	$1.870^{+0.025}_{-0.025}$ (-0.3 $\sigma$ )	$\sigma_8(0.57)$	0.6080	$0.609^{+0.017}_{-0.017}$ (+0.2 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1221.7	$1220^{+25}_{-24}$ (-0.5 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246237	$0.24626^{+0.00019}_{-0.00019}$ (-3.9 $\sigma$ )
$A^{\text{kSZ}}$	6.5	—	$D_{220}$	5698	$5697^{+82}_{-79}$ (-0.5 $\sigma$ )	$f_{2000}^{143}$	30.1	$29^{+6}_{-6}$ (-0.4 $\sigma$ )
$A_{100}^{\text{dust}}$	0.985	$0.99^{+0.38}_{-0.37}$	$D_{810}$	2527.7	$2529^{+27}_{-27}$ (-0.3 $\sigma$ )	$f_{2000}^{217}$	107.29	$106.6^{+3.9}_{-4.1}$ (+0.2 $\sigma$ )
$A_{143}^{\text{dust}}$	1.026	$1.03^{+0.36}_{-0.35}$	$D_{1420}$	813.5	$814^{+10}_{-9.7}$ (-0.0 $\sigma$ )	$f_{2000}^{143 \times 217}$	32.36	$32^{+4}_{-4}$ (-0.4 $\sigma$ )
$A_{217}^{\text{dust}}$	1.222	$1.21^{+0.23}_{-0.23}$	$n_{s,0.002}$	0.9683	$0.970^{+0.012}_{-0.012}$ (+0.3 $\sigma$ )	$\chi_{\text{lensing}}^2$	9.04	$9.8 (\nu: 0.9)$ (-0.1 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.945	$0.98^{+0.36}_{-0.35}$	$Y_{\text{P}}$	0.244908	$0.24493^{+0.00020}_{-0.00018}$ (-3.9 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10494.69	$10495.2 (\nu: 0.7)$ (-0.3 $\sigma$ )
$c_{100}$	0.99662	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	Age/Gyr	13.803	$13.797^{+0.072}_{-0.077}$ (-0.1 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	8046.7	$8061.2 (\nu: 16.3)$
$c_{217}$	0.99760	$0.9973^{+0.0034}_{-0.0035}$ (+0.9 $\sigma$ )	$z_*$	1089.97	$1089.90^{+0.81}_{-0.82}$ (-0.1 $\sigma$ )	$\chi_{\text{prior}}^2$	3.8	$8.5 (\nu: 6.2)$ (+0.3 $\sigma$ )
$\beta_1^1$	-0.05	$-0.1^{+2.0}_{-2.0}$	$r_*$	144.91	$144.92^{+0.86}_{-0.84}$ (+0.1 $\sigma$ )	$\chi_{\text{CMB}}^2$	18550.4	$18566.2 (\nu: 16.5)$ (+1329.1 $\sigma$ )

Best-fit  $\chi_{\text{eff}}^2 = 18554.26$ ;  $\Delta\chi_{\text{eff}}^2 = 7281.83$ ;  $\bar{\chi}_{\text{eff}}^2 = 18574.65$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7282.34$ ;  $R - 1 = 0.00808$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.04 ( $\Delta$  -0.13) low1\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.69 ( $\Delta$  -0.17) CamSpec like\_v9.10CMH\_unified: 8046.69

### 2.131 base\_CamSpecHM\_TT\_lowTEB\_lensing\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02225^{+0.00039}_{-0.00039} (+0.0\sigma)$	$\Omega_m$	$0.308^{+0.014}_{-0.014} (-0.1\sigma)$	$100\theta_D$	$0.16097^{+0.00051}_{-0.00049} (-0.1\sigma)$
$\Omega_c h^2$	$0.1186^{+0.0024}_{-0.0024} (-0.0\sigma)$	$\Omega_m h^2$	$0.1415^{+0.0023}_{-0.0023} (-0.0\sigma)$	$z_{\text{eq}}$	$3365^{+55}_{-54} (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04105^{+0.00082}_{-0.00080} (+0.1\sigma)$	$\Omega_m h^3$	$0.09592^{+0.00092}_{-0.00088} (+0.0\sigma)$	$100\theta_{\text{eq}}$	$0.820^{+0.010}_{-0.010} (+0.0\sigma)$
$\tau$	$0.068^{+0.026}_{-0.025} (+0.2\sigma)$	$\sigma_8$	$0.816^{+0.017}_{-0.018} (+0.2\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07182^{+0.00081}_{-0.00080} (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.064^{+0.048}_{-0.048} (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.013}_{-0.013} (+0.1\sigma)$	$H(0.57)$	$93.06^{+0.53}_{-0.53} (+0.1\sigma)$
$n_s$	$0.9693^{+0.0087}_{-0.0085} (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.013}_{-0.014} (+0.1\sigma)$	$D_A(0.57)$	$1385^{+15}_{-15} (-0.1\sigma)$
$y_{\text{cal}}$	$1.0002^{+0.0051}_{-0.0049} (+0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.991^{+0.021}_{-0.021} (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6751^{+0.0037}_{-0.0036} (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$248^{+40}_{-40} (-0.4\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.447^{+0.048}_{-0.049} (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.4737^{+0.0099}_{-0.010} (+0.1\sigma)$
$A_{143}^{\text{PS}}$	$39^{+20}_{-10} (-0.6\sigma)$	$z_{\text{re}}$	$9.0^{+2.3}_{-2.5} (+0.2\sigma)$	$\sigma_8(0.57)$	$0.608^{+0.014}_{-0.014} (+0.2\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} (+0.1\sigma)$	$10^9 A_s$	$2.14^{+0.10}_{-0.10} (+0.1\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24625^{+0.00017}_{-0.00017} (-4.5\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} (-2.8\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.022}_{-0.022} (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.62 (-1.0\sigma)$	$D_{40}$	$1220^{+23}_{-22} (-0.5\sigma)$	$f_{2000}^{217}$	$106.6^{+3.9}_{-3.9} (+0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{220}$	$5697^{+81}_{-78} (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2529^{+26}_{-27} (-0.2\sigma)$	$\chi_{\text{lensing}}^2$	$9.8 (\nu: 0.9) (-0.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$814.4^{+9.5}_{-9.7} (-0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.0 (\nu: 0.5) (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$n_{\text{s},0.002}$	$0.9693^{+0.0087}_{-0.0085} (+0.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$8060.9 (\nu: 15.7)$
$A_{143}^{\text{dust}}$	$1.03^{+0.37}_{-0.36}$	$Y_{\text{P}}$	$0.24492^{+0.00017}_{-0.00016} (-4.5\sigma)$	$\chi_{6\text{DF}}^2$	$0.044 (\nu: 0.0) (-0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.23}$	$\text{Age}/\text{Gyr}$	$13.799^{+0.057}_{-0.057} (-0.0\sigma)$	$\chi_{\text{MGS}}^2$	$1.54 (\nu: 0.2) (+0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.35}$	$z_*$	$1089.92^{+0.60}_{-0.59} (-0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.82 (\nu: 0.2) (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	$r_*$	$144.90^{+0.58}_{-0.60} (+0.0\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.55 (\nu: 0.1) (-0.1\sigma)$
$c_{217}$	$0.9974^{+0.0035}_{-0.0035} (+0.9\sigma)$	$100\theta_*$	$1.04126^{+0.00081}_{-0.00078} (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.5 (\nu: 6.1) (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	$1059.55^{+0.90}_{-0.87} (-0.0\sigma)$	$\chi_{\text{CMB}}^2$	$18565.7 (\nu: 15.6) (+1349.7\sigma)$
$H_0$	$67.8^{+1.1}_{-1.1} (+0.1\sigma)$	$r_{\text{drag}}$	$147.61^{+0.62}_{-0.64} (+0.0\sigma)$	$\chi_{\text{BAO}}^2$	$4.96 (\nu: 0.4) (-0.0\sigma)$
$\Omega_\Lambda$	$0.692^{+0.014}_{-0.014} (+0.1\sigma)$	$k_{\text{D}}$	$0.14025^{+0.00084}_{-0.00082} (+0.0\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18579.11; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.42; R - 1 = 0.01472$$

### 2.132 base\_CamSpecHM\_TT\_lowTEB\_lensing\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02228^{+0.00045}_{-0.00043} \quad (+0.0\sigma)$	$\Omega_\Lambda$	$0.694^{+0.022}_{-0.023} \quad (+0.1\sigma)$	$r_{\text{drag}}$	$147.67^{+0.82}_{-0.81} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1182^{+0.0036}_{-0.0036} \quad (-0.1\sigma)$	$\Omega_m$	$0.306^{+0.023}_{-0.021} \quad (-0.1\sigma)$	$k_D$	$0.14021^{+0.00091}_{-0.00091} \quad (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04109^{+0.00091}_{-0.00087} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1411^{+0.0033}_{-0.0034} \quad (-0.1\sigma)$	$100\theta_D$	$0.16095^{+0.00052}_{-0.00051} \quad (-0.1\sigma)$
$\tau$	$0.070^{+0.032}_{-0.031} \quad (+0.2\sigma)$	$\Omega_m h^3$	$0.09593^{+0.00092}_{-0.00088} \quad (+0.0\sigma)$	$z_{\text{eq}}$	$3357^{+80}_{-81} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.069^{+0.058}_{-0.056} \quad (+0.1\sigma)$	$\sigma_8$	$0.817^{+0.018}_{-0.018} \quad (+0.2\sigma)$	$100\theta_{\text{eq}}$	$0.821^{+0.016}_{-0.015} \quad (+0.1\sigma)$
$n_s$	$0.970^{+0.011}_{-0.011} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.016}_{-0.016} \quad (+0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0719^{+0.0013}_{-0.0012} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0002^{+0.0050}_{-0.0049} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.014}_{-0.014} \quad (+0.1\sigma)$	$H(0.57)$	$93.14^{+0.79}_{-0.74} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-50} \quad (-0.5\sigma)$	$\sigma_8/h^{0.5}$	$0.991^{+0.021}_{-0.021} \quad (+0.2\sigma)$	$D_A(0.57)$	$1383^{+22}_{-22} \quad (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$39^{+20}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.048}_{-0.049} \quad (-0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.6745^{+0.0057}_{-0.0056} \quad (-0.1\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$9.2^{+2.9}_{-2.9} \quad (+0.2\sigma)$	$f\sigma_8(0.57)$	$0.473^{+0.010}_{-0.010} \quad (+0.2\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s$	$2.15^{+0.13}_{-0.12} \quad (+0.1\sigma)$	$\sigma_8(0.57)$	$0.609^{+0.017}_{-0.016} \quad (+0.2\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.63 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.025}_{-0.025} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24626^{+0.00019}_{-0.00019} \quad (-4.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{40}$	$1219^{+25}_{-24} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5699^{+82}_{-79} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.5^{+4.0}_{-3.9} \quad (+0.2\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2529^{+26}_{-26} \quad (-0.2\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.37}$	$D_{1420}$	$814.6^{+9.7}_{-9.8} \quad (-0.0\sigma)$	$\chi_{\text{lensing}}^2$	$9.7 \quad (\nu: 0.9) \quad (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.36}$	$n_{s,0.002}$	$0.970^{+0.011}_{-0.011} \quad (+0.4\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.1 \quad (\nu: 0.7) \quad (-0.3\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.24494^{+0.00019}_{-0.00018} \quad (-4.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.3 \quad (\nu: 16.1)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.36}_{-0.35}$	$\text{Age/Gyr}$	$13.793^{+0.070}_{-0.073} \quad (-0.1\sigma)$	$\chi_{\text{JLA}}^2$	$706.71 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$z_*$	$1089.86^{+0.77}_{-0.77} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.5 \quad (\nu: 6.2) \quad (+0.3\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$r_*$	$144.97^{+0.82}_{-0.80} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18566.1 \quad (\nu: 16.1) \quad (+1332.0\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$100\theta_*$	$1.04130^{+0.00090}_{-0.00086} \quad (+0.1\sigma)$		
$H_0$	$68.0^{+1.7}_{-1.7} \quad (+0.1\sigma)$	$z_{\text{drag}}$	$1059.59^{+0.92}_{-0.91} \quad (-0.0\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 19281.30; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.37; R - 1 = 0.01071$$

### 2.133 base\_CamSpecHM\_TT\_lowTEB\_lensing\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00045}_{-0.00044} \quad (+0.0\sigma)$	$\Omega_\Lambda$	$0.695^{+0.022}_{-0.023} \quad (+0.1\sigma)$	$r_{\text{drag}}$	$147.69^{+0.84}_{-0.82} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1181^{+0.0037}_{-0.0038} \quad (-0.1\sigma)$	$\Omega_m$	$0.305^{+0.023}_{-0.022} \quad (-0.1\sigma)$	$k_D$	$0.14020^{+0.00092}_{-0.00091} \quad (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04112^{+0.00092}_{-0.00088} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1410^{+0.0034}_{-0.0036} \quad (-0.1\sigma)$	$100\theta_D$	$0.16093^{+0.00052}_{-0.00051} \quad (-0.1\sigma)$
$\tau$	$0.071^{+0.033}_{-0.031} \quad (+0.2\sigma)$	$\Omega_m h^3$	$0.09595^{+0.00091}_{-0.00089} \quad (+0.0\sigma)$	$z_{\text{eq}}$	$3354^{+82}_{-85} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.071^{+0.058}_{-0.057} \quad (+0.1\sigma)$	$\sigma_8$	$0.818^{+0.018}_{-0.019} \quad (+0.2\sigma)$	$100\theta_{\text{eq}}$	$0.822^{+0.017}_{-0.016} \quad (+0.1\sigma)$
$n_s$	$0.971^{+0.012}_{-0.011} \quad (+0.3\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.016}_{-0.016} \quad (+0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0720^{+0.0013}_{-0.0013} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0002^{+0.0050}_{-0.0049} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.014}_{-0.014} \quad (+0.1\sigma)$	$H(0.57)$	$93.17^{+0.80}_{-0.76} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-50} \quad (-0.4\sigma)$	$\sigma_8/h^{0.5}$	$0.991^{+0.021}_{-0.021} \quad (+0.2\sigma)$	$D_A(0.57)$	$1382^{+23}_{-23} \quad (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$39^{+20}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.048}_{-0.049} \quad (-0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.6743^{+0.0058}_{-0.0058} \quad (-0.1\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$9.3^{+3.0}_{-3.0} \quad (+0.2\sigma)$	$f\sigma_8(0.57)$	$0.473^{+0.010}_{-0.010} \quad (+0.2\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s$	$2.16^{+0.13}_{-0.12} \quad (+0.1\sigma)$	$\sigma_8(0.57)$	$0.610^{+0.017}_{-0.016} \quad (+0.2\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.63 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.868^{+0.025}_{-0.025} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24627^{+0.00019}_{-0.00019} \quad (-4.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{40}$	$1219^{+25}_{-24} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5700^{+82}_{-79} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.5^{+4.0}_{-3.9} \quad (+0.2\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2529^{+26}_{-26} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.37}$	$D_{1420}$	$814.8^{+9.8}_{-9.8} \quad (-0.0\sigma)$	$\chi_{\text{lensing}}^2$	$9.7 \quad (\nu: 0.8) \quad (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.37}_{-0.36}$	$n_{s,0.002}$	$0.971^{+0.012}_{-0.011} \quad (+0.3\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.1 \quad (\nu: 0.7) \quad (-0.3\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.22}_{-0.23}$	$Y_{\text{P}}$	$0.24494^{+0.00020}_{-0.00018} \quad (-4.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.4 \quad (\nu: 16.2)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.36}_{-0.35}$	$\text{Age/Gyr}$	$13.790^{+0.071}_{-0.074} \quad (-0.1\sigma)$	$\chi_{\text{H070p6}}^2$	$0.65 \quad (\nu: 0.1) \quad (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$z_*$	$1089.82^{+0.79}_{-0.79} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.5 \quad (\nu: 6.2) \quad (+0.3\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$r_*$	$144.99^{+0.84}_{-0.82} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18566.2 \quad (\nu: 16.2) \quad (+1327.1\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.04133^{+0.00090}_{-0.00086} \quad (+0.1\sigma)$		
$H_0$	$68.1^{+1.7}_{-1.7} \quad (+0.1\sigma)$	$z_{\text{drag}}$	$1059.62^{+0.93}_{-0.90} \quad (-0.0\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18575.32; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.36; R - 1 = 0.01041$$

### 2.134 base\_CamSpecHM\_TT\_lowTEB\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02228^{+0.00039}_{-0.00039} (+0.0\sigma)$	$\Omega_m h^2$	$0.1412^{+0.0022}_{-0.0022} (-0.0\sigma)$	$100\theta_{\text{eq}}$	$0.8208^{+0.0099}_{-0.0099} (+0.0\sigma)$
$\Omega_c h^2$	$0.1183^{+0.0023}_{-0.0023} (-0.0\sigma)$	$\Omega_m h^3$	$0.09594^{+0.00091}_{-0.00089} (+0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07190^{+0.00079}_{-0.00078} (+0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04109^{+0.00081}_{-0.00080} (+0.1\sigma)$	$\sigma_8$	$0.817^{+0.017}_{-0.018} (+0.2\sigma)$	$H(0.57)$	$93.12^{+0.53}_{-0.52} (+0.0\sigma)$
$\tau$	$0.069^{+0.025}_{-0.025} (+0.2\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.013}_{-0.012} (+0.1\sigma)$	$D_A(0.57)$	$1384^{+15}_{-14} (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.067^{+0.047}_{-0.048} (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.013}_{-0.014} (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6747^{+0.0036}_{-0.0035} (-0.0\sigma)$
$n_s$	$0.9699^{+0.0087}_{-0.0084} (+0.4\sigma)$	$\sigma_8/h^{0.5}$	$0.991^{+0.021}_{-0.021} (+0.2\sigma)$	$f\sigma_8(0.57)$	$0.4736^{+0.0099}_{-0.010} (+0.2\sigma)$
$y_{\text{cal}}$	$1.0002^{+0.0051}_{-0.0049} (-0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.048}_{-0.049} (-0.1\sigma)$	$\sigma_8(0.57)$	$0.609^{+0.014}_{-0.014} (+0.2\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-40} (-0.4\sigma)$	$z_{\text{re}}$	$9.1^{+2.3}_{-2.4} (+0.2\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24626^{+0.00016}_{-0.00017} (-4.6\sigma)$
$A_{143}^{\text{PS}}$	$39^{+10}_{-10} (-0.6\sigma)$	$10^9 A_s$	$2.15^{+0.10}_{-0.10} (+0.1\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} (-0.4\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} (+0.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.022}_{-0.022} (-0.3\sigma)$	$f_{2000}^{217}$	$106.5^{+3.9}_{-3.9} (+0.2\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} (-2.8\sigma)$	$D_{40}$	$1220^{+23}_{-22} (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.63 (-1.0\sigma)$	$D_{220}$	$5699^{+81}_{-78} (-0.5\sigma)$	$\chi_{\text{lensing}}^2$	$9.7 (\nu: 0.8) (-0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{810}$	$2529^{+27}_{-27} (-0.2\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.0 (\nu: 0.5) (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{1420}$	$814.6^{+9.6}_{-9.7} (-0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.0 (\nu: 15.8)$
$A^{\text{kSZ}}$	—	$n_{\text{s}, 0.002}$	$0.9699^{+0.0087}_{-0.0084} (+0.4\sigma)$	$\chi_{\text{H070p6}}^2$	$0.67 (\nu: 0.0) (-0.1\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.37}$	$Y_{\text{P}}$	$0.24494^{+0.00017}_{-0.00016} (-4.6\sigma)$	$\chi_{\text{JLA}}^2$	$706.66 (\nu: 0.0) (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.37}_{-0.36}$	$\text{Age/Gyr}$	$13.794^{+0.056}_{-0.056} (-0.0\sigma)$	$\chi_{6\text{DF}}^2$	$0.037 (\nu: 0.0) (-0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.22}_{-0.23}$	$z_*$	$1089.87^{+0.59}_{-0.57} (-0.1\sigma)$	$\chi_{\text{MGS}}^2$	$1.65 (\nu: 0.2) (+0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.35}$	$r_*$	$144.94^{+0.58}_{-0.59} (+0.0\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.82 (\nu: 0.2) (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	$100\theta_*$	$1.04129^{+0.00080}_{-0.00078} (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.45 (\nu: 0.1) (-0.1\sigma)$
$c_{217}$	$0.9974^{+0.0035}_{-0.0035} (+0.9\sigma)$	$z_{\text{drag}}$	$1059.59^{+0.88}_{-0.88} (-0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.5 (\nu: 6.1) (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_{\text{drag}}$	$147.64^{+0.62}_{-0.64} (+0.0\sigma)$	$\chi_{\text{CMB}}^2$	$18565.7 (\nu: 15.6) (+1348.8\sigma)$
$H_0$	$67.9^{+1.0}_{-1.1} (+0.0\sigma)$	$k_{\text{D}}$	$0.14023^{+0.00084}_{-0.00082} (+0.0\sigma)$	$\chi_{\text{BAO}}^2$	$4.96 (\nu: 0.4) (-0.0\sigma)$
$\Omega_{\Lambda}$	$0.694^{+0.013}_{-0.014} (+0.0\sigma)$	$100\theta_{\text{D}}$	$0.16095^{+0.00051}_{-0.00049} (-0.1\sigma)$		
$\Omega_{\text{m}}$	$0.306^{+0.014}_{-0.013} (-0.0\sigma)$	$z_{\text{eq}}$	$3360^{+54}_{-53} (-0.0\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 19286.43; \Delta\chi_{\text{eff}}^2 = 7282.41; R - 1 = 0.01426$$

### 2.135 base\_CamSpecHM\_TT\_lowTEB\_lensing\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02228^{+0.00045}_{-0.00043} \quad (+0.0\sigma)$	$H_0$	$67.9^{+1.7}_{-1.6} \quad (+0.0\sigma)$	$100\theta_*$	$1.04129^{+0.00090}_{-0.00085} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1183^{+0.0036}_{-0.0037} \quad (-0.0\sigma)$	$\Omega_\Lambda$	$0.694^{+0.022}_{-0.022} \quad (+0.0\sigma)$	$z_{\text{drag}}$	$1059.58^{+0.93}_{-0.90} \quad (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04109^{+0.00091}_{-0.00085} \quad (+0.1\sigma)$	$\Omega_m$	$0.306^{+0.022}_{-0.022} \quad (-0.0\sigma)$	$r_{\text{drag}}$	$147.65^{+0.83}_{-0.79} \quad (+0.0\sigma)$
$\tau$	$0.071^{+0.028}_{-0.027} \quad (+0.2\sigma)$	$\Omega_m h^2$	$0.1412^{+0.0033}_{-0.0035} \quad (-0.0\sigma)$	$k_D$	$0.14022^{+0.00091}_{-0.00091} \quad (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.069^{+0.053}_{-0.050} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.09593^{+0.00092}_{-0.00088} \quad (+0.0\sigma)$	$100\theta_D$	$0.16095^{+0.00051}_{-0.00051} \quad (-0.1\sigma)$
$n_s$	$0.970^{+0.012}_{-0.011} \quad (+0.3\sigma)$	$\sigma_8$	$0.818^{+0.017}_{-0.016} \quad (+0.2\sigma)$	$z_{\text{eq}}$	$3359^{+79}_{-84} \quad (-0.0\sigma)$
$y_{\text{cal}}$	$1.0002^{+0.0050}_{-0.0049} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.016}_{-0.017} \quad (+0.1\sigma)$	$100\theta_{\text{eq}}$	$0.821^{+0.016}_{-0.016} \quad (+0.0\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-50} \quad (-0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.014}_{-0.014} \quad (+0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0719^{+0.0013}_{-0.0013} \quad (+0.0\sigma)$
$A_{143}^{\text{PS}}$	$39^{+20}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.992^{+0.020}_{-0.020} \quad (+0.2\sigma)$	$H(0.57)$	$93.12^{+0.78}_{-0.78} \quad (+0.0\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.448^{+0.048}_{-0.047} \quad (-0.1\sigma)$	$D_A(0.57)$	$1383^{+22}_{-23} \quad (-0.0\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$z_{\text{re}}$	$< 11.5 \quad (+0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6746^{+0.0056}_{-0.0057} \quad (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.63 \quad (-1.0\sigma)$	$10^9 A_s$	$2.15^{+0.11}_{-0.11} \quad (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.4739^{+0.0097}_{-0.0099} \quad (+0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.024}_{-0.025} \quad (-0.3\sigma)$	$\sigma_8(0.57)$	$0.610^{+0.015}_{-0.015} \quad (+0.2\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1220^{+25}_{-24} \quad (-0.5\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24626^{+0.00019}_{-0.00019} \quad (-4.0\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5698^{+83}_{-80} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.37}$	$D_{810}$	$2529^{+26}_{-26} \quad (-0.2\sigma)$	$f_{2000}^{217}$	$106.5^{+3.9}_{-3.9} \quad (+0.2\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.37}_{-0.36}$	$D_{1420}$	$814.5^{+9.8}_{-9.9} \quad (-0.0\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.22}_{-0.23}$	$n_{s,0.002}$	$0.970^{+0.012}_{-0.011} \quad (+0.3\sigma)$	$\chi_{\text{lensing}}^2$	$9.8 \quad (\nu: 0.9) \quad (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.36}_{-0.35}$	$Y_{\text{P}}$	$0.24493^{+0.00020}_{-0.00018} \quad (-4.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.1 \quad (\nu: 0.6) \quad (-0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$\text{Age/Gyr}$	$13.794^{+0.073}_{-0.074} \quad (-0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.2 \quad (\nu: 16.0)$
$c_{217}$	$0.9974^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$z_*$	$1089.87^{+0.75}_{-0.79} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.5 \quad (\nu: 6.1) \quad (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$r_*$	$144.95^{+0.84}_{-0.78} \quad (+0.0\sigma)$	$\chi_{\text{CMB}}^2$	$18566.0 \quad (\nu: 15.9) \quad (+1342.7\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 18574.51; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.45; R - 1 = 0.01130$$



### 2.136 base\_CamSpecHM\_TT\_lowTEB\_lensing\_post\_BAO\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02226^{+0.00039}_{-0.00039} (+0.0\sigma)$	$\Omega_m$	$0.307^{+0.014}_{-0.014} (-0.0\sigma)$	$100\theta_D$	$0.16097^{+0.00050}_{-0.00049} (-0.1\sigma)$
$\Omega_c h^2$	$0.1185^{+0.0023}_{-0.0023} (-0.0\sigma)$	$\Omega_m h^2$	$0.1414^{+0.0023}_{-0.0022} (-0.0\sigma)$	$z_{\text{eq}}$	$3364^{+54}_{-54} (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04106^{+0.00082}_{-0.00080} (+0.0\sigma)$	$\Omega_m h^3$	$0.09592^{+0.00092}_{-0.00089} (+0.0\sigma)$	$100\theta_{\text{eq}}$	$0.820^{+0.010}_{-0.010} (+0.0\sigma)$
$\tau$	$0.069^{+0.023}_{-0.024} (+0.2\sigma)$	$\sigma_8$	$0.817^{+0.017}_{-0.016} (+0.2\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07183^{+0.00080}_{-0.00078} (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.066^{+0.045}_{-0.045} (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.013}_{-0.013} (+0.1\sigma)$	$H(0.57)$	$93.07^{+0.53}_{-0.52} (+0.0\sigma)$
$n_s$	$0.9694^{+0.0086}_{-0.0083} (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.013}_{-0.013} (+0.1\sigma)$	$D_A(0.57)$	$1385^{+14}_{-15} (-0.0\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0051}_{-0.0049} (+0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.992^{+0.020}_{-0.020} (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6750^{+0.0036}_{-0.0036} (-0.0\sigma)$
$A_{100}^{\text{PS}}$	$248^{+40}_{-40} (-0.4\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.448^{+0.048}_{-0.046} (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.4739^{+0.0097}_{-0.0095} (+0.1\sigma)$
$A_{143}^{\text{PS}}$	$39^{+20}_{-10} (-0.6\sigma)$	$z_{\text{re}}$	$9.1^{+2.1}_{-2.3} (+0.2\sigma)$	$\sigma_8(0.57)$	$0.609^{+0.014}_{-0.013} (+0.2\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} (+0.1\sigma)$	$10^9 A_s$	$2.146^{+0.096}_{-0.095} (+0.1\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24625^{+0.00017}_{-0.00017} (-4.5\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} (-2.8\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.022}_{-0.022} (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.62 (-1.0\sigma)$	$D_{40}$	$1220^{+23}_{-22} (-0.5\sigma)$	$f_{2000}^{217}$	$106.6^{+3.9}_{-3.9} (+0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{220}$	$5697^{+81}_{-79} (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2529^{+27}_{-27} (-0.2\sigma)$	$\chi_{\text{lensing}}^2$	$9.8 (\nu: 0.9) (-0.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$814.4^{+9.5}_{-9.8} (-0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.0 (\nu: 0.5) (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$n_{\text{s},0.002}$	$0.9694^{+0.0086}_{-0.0083} (+0.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$8060.9 (\nu: 15.6)$
$A_{143}^{\text{dust}}$	$1.03^{+0.37}_{-0.36}$	$Y_{\text{P}}$	$0.24493^{+0.00017}_{-0.00016} (-4.6\sigma)$	$\chi_{6\text{DF}}^2$	$0.042 (\nu: 0.0) (-0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.23}$	$\text{Age}/\text{Gyr}$	$13.798^{+0.056}_{-0.056} (-0.0\sigma)$	$\chi_{\text{MGS}}^2$	$1.56 (\nu: 0.2) (+0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.36}$	$z_*$	$1089.92^{+0.59}_{-0.58} (-0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.81 (\nu: 0.2) (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	$r_*$	$144.90^{+0.58}_{-0.59} (+0.0\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.53 (\nu: 0.1) (-0.0\sigma)$
$c_{217}$	$0.9974^{+0.0034}_{-0.0035} (+0.9\sigma)$	$100\theta_*$	$1.04126^{+0.00080}_{-0.00078} (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.5 (\nu: 6.1) (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	$1059.55^{+0.89}_{-0.88} (-0.0\sigma)$	$\chi_{\text{CMB}}^2$	$18565.6 (\nu: 15.4) (+1360.2\sigma)$
$H_0$	$67.8^{+1.1}_{-1.0} (+0.0\sigma)$	$r_{\text{drag}}$	$147.61^{+0.62}_{-0.64} (+0.0\sigma)$	$\chi_{\text{BAO}}^2$	$4.94 (\nu: 0.4) (+0.0\sigma)$
$\Omega_\Lambda$	$0.693^{+0.014}_{-0.014} (+0.0\sigma)$	$k_{\text{D}}$	$0.14025^{+0.00084}_{-0.00082} (+0.0\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18579.00; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.47; R - 1 = 0.01600$$

### 2.137 base\_CamSpecHM\_TT\_lowTEB\_lensing\_post\_reion

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02217^{+0.00040}_{-0.00038} \quad (-0.1\sigma)$	$H_0$	$67.3^{+1.3}_{-1.3} \quad (-0.1\sigma)$	$100\theta_*$	$1.04110^{+0.00082}_{-0.00078} \quad (+0.0\sigma)$
$\Omega_c h^2$	$0.1197^{+0.0029}_{-0.0029} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.685^{+0.017}_{-0.018} \quad (-0.1\sigma)$	$z_{\text{drag}}$	$1059.43^{+0.84}_{-0.87} \quad (-0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04088^{+0.00083}_{-0.00079} \quad (-0.0\sigma)$	$\Omega_m$	$0.315^{+0.018}_{-0.017} \quad (+0.1\sigma)$	$r_{\text{drag}}$	$147.40^{+0.72}_{-0.70} \quad (-0.1\sigma)$
$\tau$	$0.055^{+0.014}_{-0.013} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1425^{+0.0027}_{-0.0027} \quad (+0.1\sigma)$	$k_D$	$0.14040^{+0.00086}_{-0.00086} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.042^{+0.029}_{-0.027} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.09588^{+0.00090}_{-0.00085} \quad (+0.0\sigma)$	$100\theta_D$	$0.16103^{+0.00048}_{-0.00049} \quad (-0.0\sigma)$
$n_s$	$0.9662^{+0.0088}_{-0.0088} \quad (+0.3\sigma)$	$\sigma_8$	$0.810^{+0.012}_{-0.012} \quad (+0.1\sigma)$	$z_{\text{eq}}$	$3390^{+65}_{-64} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0004^{+0.0051}_{-0.0050} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.016}_{-0.017} \quad (+0.1\sigma)$	$100\theta_{\text{eq}}$	$0.815^{+0.012}_{-0.012} \quad (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$250^{+40}_{-40} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.014}_{-0.014} \quad (+0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07142^{+0.00099}_{-0.00096} \quad (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-10} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.988^{+0.019}_{-0.020} \quad (+0.1\sigma)$	$H(0.57)$	$92.85^{+0.61}_{-0.55} \quad (-0.1\sigma)$
$A_{217}^{\text{PS}}$	$96^{+30}_{-30} \quad (+0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.438^{+0.045}_{-0.046} \quad (-0.1\sigma)$	$D_A(0.57)$	$1392^{+17}_{-18} \quad (+0.1\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$z_{\text{re}}$	$< 9.05 \quad (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6769^{+0.0046}_{-0.0045} \quad (+0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.53 \quad (-0.9\sigma)$	$10^9 A_s$	$2.095^{+0.060}_{-0.057} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.4719^{+0.0091}_{-0.0095} \quad (+0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.021}_{-0.022} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.6021^{+0.0087}_{-0.0086} \quad (+0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1223^{+24}_{-23} \quad (-0.5\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24621^{+0.00017}_{-0.00017} \quad (-4.4\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5697^{+85}_{-80} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$30^{+5}_{-5} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.996^{+0.37}_{-0.38}$	$D_{810}$	$2532^{+27}_{-26} \quad (-0.2\sigma)$	$f_{2000}^{217}$	$107.1^{+3.8}_{-3.7} \quad (+0.2\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.37}_{-0.36}$	$D_{1420}$	$814.3^{+9.9}_{-9.8} \quad (-0.0\sigma)$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4} \quad (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.24}$	$n_{s,0.002}$	$0.9662^{+0.0088}_{-0.0088} \quad (+0.3\sigma)$	$\chi_{\text{lensing}}^2$	$9.6 \quad (\nu: 0.6) \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.36}_{-0.36}$	$Y_{\text{P}}$	$0.24489^{+0.00017}_{-0.00016} \quad (-4.4\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.00 \quad (\nu: 0.5) \quad (-0.5\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$\text{Age/Gyr}$	$13.817^{+0.057}_{-0.060} \quad (+0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.5 \quad (\nu: 15.7)$
$c_{217}$	$0.9974^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$z_*$	$1090.13^{+0.64}_{-0.66} \quad (+0.0\sigma)$	$\chi_{\text{prior}}^2$	$9.6 \quad (\nu: 7.4) \quad (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_*$	$144.67^{+0.68}_{-0.68} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18566.1 \quad (\nu: 15.6) \quad (+1368.3\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 18575.70; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.58; R - 1 = 0.02751$$

## 2.138 base\_CamSpecHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022355	$0.02237^{+0.00032}_{-0.00031}$ (+0.7 $\sigma$ )	$\beta_1^1$	-0.03	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	1.04109	$1.04109^{+0.00060}_{-0.00060}$ (+0.1 $\sigma$ )
$\Omega_c h^2$	0.11868	$0.1187^{+0.0027}_{-0.0027}$ (-0.4 $\sigma$ )	$H_0$	67.80	$67.8^{+1.3}_{-1.2}$ (+0.5 $\sigma$ )	$z_{\text{drag}}$	1059.78	$1059.82^{+0.64}_{-0.66}$ (+0.6 $\sigma$ )
$100\theta_{\text{MC}}$	1.04089	$1.04089^{+0.00061}_{-0.00061}$ (+0.1 $\sigma$ )	$\Omega_\Lambda$	0.6918	$0.692^{+0.016}_{-0.017}$ (+0.4 $\sigma$ )	$r_{\text{drag}}$	147.46	$147.44^{+0.60}_{-0.58}$ (+0.1 $\sigma$ )
$\tau$	0.0668	$0.066^{+0.028}_{-0.027}$ (+0.3 $\sigma$ )	$\Omega_m$	0.3082	$0.308^{+0.017}_{-0.016}$ (-0.4 $\sigma$ )	$k_D$	0.14048	$0.14051^{+0.00064}_{-0.00065}$ (+0.2 $\sigma$ )
$\ln(10^{10} A_s)$	3.062	$3.062^{+0.051}_{-0.050}$ (+0.1 $\sigma$ )	$\Omega_m h^2$	0.14168	$0.1417^{+0.0025}_{-0.0025}$ (-0.3 $\sigma$ )	$100\theta_D$	0.160799	$0.16078^{+0.00037}_{-0.00036}$ (-0.8 $\sigma$ )
$n_s$	0.9684	$0.9686^{+0.0092}_{-0.0091}$ (+0.7 $\sigma$ )	$\Omega_m h^3$	0.09605	$0.09608^{+0.00060}_{-0.00060}$ (+0.4 $\sigma$ )	$z_{\text{eq}}$	3370	$3371^{+60}_{-61}$ (-0.3 $\sigma$ )
$y_{\text{cal}}$	1.00008	$1.0001^{+0.0050}_{-0.0049}$ (-0.0 $\sigma$ )	$\sigma_8$	0.8153	$0.815^{+0.018}_{-0.018}$ (+0.0 $\sigma$ )	$100\theta_{\text{eq}}$	0.8190	$0.819^{+0.012}_{-0.012}$ (+0.4 $\sigma$ )
$A_{100}^{\text{PS}}$	246.6	$245^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4526	$0.453^{+0.013}_{-0.013}$ (-0.4 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07175	$0.07175^{+0.00095}_{-0.00090}$ (+0.4 $\sigma$ )
$A_{143}^{\text{PS}}$	35.6	$39^{+10}_{-10}$ (-0.7 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6075	$0.607^{+0.013}_{-0.013}$ (-0.3 $\sigma$ )	$H(0.57)$	93.08	$93.10^{+0.56}_{-0.53}$ (+0.5 $\sigma$ )
$A_{217}^{\text{PS}}$	96.7	$98^{+30}_{-30}$ (+0.1 $\sigma$ )	$\sigma_8/h^{0.5}$	0.9901	$0.990^{+0.020}_{-0.021}$ (-0.2 $\sigma$ )	$D_A(0.57)$	1385.1	$1385^{+16}_{-17}$ (-0.5 $\sigma$ )
$A_{217}^{\text{CIB}}$	48.1	$46^{+10}_{-10}$ (-2.9 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.4472	$2.446^{+0.048}_{-0.049}$ (-0.4 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.67520	$0.6752^{+0.0042}_{-0.0042}$ (-0.4 $\sigma$ )
$A_{143}^{\text{tSZ}}$	4.03	< 6.71 (-1.0 $\sigma$ )	$z_{\text{re}}$	8.89	$8.8^{+2.6}_{-2.7}$ (+0.2 $\sigma$ )	$f\sigma_8(0.57)$	0.4732	$0.4730^{+0.0099}_{-0.0099}$ (-0.2 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.440	$0.51^{+0.22}_{-0.21}$	$10^9 A_s$	2.138	$2.14^{+0.11}_{-0.10}$ (+0.1 $\sigma$ )	$\sigma_8(0.57)$	0.6073	$0.607^{+0.015}_{-0.015}$ (+0.1 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8707	$1.871^{+0.023}_{-0.023}$ (-0.6 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246296	$0.24630^{+0.00013}_{-0.00013}$ (-5.1 $\sigma$ )
$A^{\text{kSZ}}$	4.0	—	$D_{40}$	1222.3	$1222^{+23}_{-22}$ (-0.8 $\sigma$ )	$f_{2000}^{143}$	29.1	$29^{+5}_{-5}$ (-0.5 $\sigma$ )
$A_{100}^{\text{dust}}$	0.986	$0.99^{+0.38}_{-0.37}$	$D_{220}$	5709	$5709^{+76}_{-76}$ (-0.4 $\sigma$ )	$f_{2000}^{217}$	106.39	$106.2^{+3.6}_{-3.6}$ (-0.0 $\sigma$ )
$A_{143}^{\text{dust}}$	1.030	$1.03^{+0.36}_{-0.36}$	$D_{810}$	2528.6	$2529^{+27}_{-27}$ (-0.4 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.70	$32^{+4}_{-4}$ (-0.6 $\sigma$ )
$A_{217}^{\text{dust}}$	1.200	$1.21^{+0.23}_{-0.22}$	$D_{1420}$	814.5	$814.7^{+9.6}_{-9.3}$ (+0.0 $\sigma$ )	$\chi_{\text{lensing}}^2$	9.24	$9.9 (\nu: 1.1)$ (-0.3 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.970	$0.99^{+0.35}_{-0.35}$	$n_{s,0.002}$	0.9684	$0.9686^{+0.0092}_{-0.0091}$ (+0.7 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10494.71	$10495.2 (\nu: 0.5)$ (-0.6 $\sigma$ )
$c_{100}$	0.99670	$0.9968^{+0.0019}_{-0.0019}$ (-1.8 $\sigma$ )	$Y_{\text{P}}$	0.244965	$0.24497^{+0.00014}_{-0.00013}$ (-5.2 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	12938.0	$12953.7 (\nu: 17.8)$
$c_{217}$	0.99713	$0.9971^{+0.0035}_{-0.0035}$ (+0.7 $\sigma$ )	Age/Gyr	13.794	$13.793^{+0.049}_{-0.051}$ (-0.5 $\sigma$ )	$\chi_{\text{prior}}^2$	3.5	$9.1 (\nu: 6.3)$ (-1.9 $\sigma$ )
$c_{TE}$	1.0050	$1.0052^{+0.0086}_{-0.0086}$	$z_*$	1089.81	$1089.80^{+0.57}_{-0.57}$ (-0.7 $\sigma$ )	$\chi_{\text{CMB}}^2$	23442.0	$23458.8 (\nu: 17.9)$ (+1572.2 $\sigma$ )
$c_{EE}$	1.0014	$1.0013^{+0.0081}_{-0.0082}$	$r_*$	144.79	$144.77^{+0.60}_{-0.59}$ (+0.2 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 23445.50$ ;  $\Delta\chi_{\text{eff}}^2 = 10498.32$ ;  $\bar{\chi}_{\text{eff}}^2 = 23467.87$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 10488.75$ ;  $R - 1 = 0.00689$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.24 ( $\Delta$  -0.54) lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.71 ( $\Delta$  -0.58) CamSpec like\_v9.10CMH\_unified: 12938.03

### 2.139 base\_CamSpecHM\_TTTEEE\_lowTEB\_lensing\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00028}_{-0.00028} (+0.6\sigma)$	$\Omega_\Lambda$	$0.692^{+0.012}_{-0.012} (+0.3\sigma)$	$100\theta_D$	$0.16078^{+0.00036}_{-0.00035} (-0.8\sigma)$
$\Omega_c h^2$	$0.1187^{+0.0020}_{-0.0020} (-0.3\sigma)$	$\Omega_m$	$0.308^{+0.012}_{-0.012} (-0.3\sigma)$	$z_{\text{eq}}$	$3370^{+46}_{-46} (-0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04090^{+0.00056}_{-0.00057} (-0.0\sigma)$	$\Omega_m h^2$	$0.1417^{+0.0019}_{-0.0019} (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.8191^{+0.0088}_{-0.0087} (+0.3\sigma)$
$\tau$	$0.067^{+0.024}_{-0.025} (+0.1\sigma)$	$\Omega_m h^3$	$0.09608^{+0.00060}_{-0.00060} (+0.4\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07176^{+0.00069}_{-0.00068} (+0.3\sigma)$
$\ln(10^{10} A_s)$	$3.062^{+0.045}_{-0.046} (+0.0\sigma)$	$\sigma_8$	$0.815^{+0.017}_{-0.017} (-0.1\sigma)$	$H(0.57)$	$93.10^{+0.43}_{-0.41} (+0.4\sigma)$
$n_s$	$0.9687^{+0.0078}_{-0.0080} (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.012}_{-0.012} (-0.3\sigma)$	$D_A(0.57)$	$1385^{+12}_{-13} (-0.4\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0050}_{-0.0048} (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.013}_{-0.013} (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6752^{+0.0031}_{-0.0031} (-0.3\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.990^{+0.020}_{-0.020} (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.4730^{+0.0098}_{-0.0098} (-0.2\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.048}_{-0.049} (-0.4\sigma)$	$\sigma_8(0.57)$	$0.607^{+0.014}_{-0.014} (+0.0\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} (+0.1\sigma)$	$z_{\text{re}}$	$8.8^{+2.3}_{-2.4} (+0.1\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24630^{+0.00012}_{-0.00012} (-5.9\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} (-2.9\sigma)$	$10^9 A_s$	$2.138^{+0.098}_{-0.098} (+0.0\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} (-0.5\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.71 (-1.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.871^{+0.022}_{-0.022} (-0.6\sigma)$	$f_{2000}^{217}$	$106.2^{+3.5}_{-3.6} (+0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{40}$	$1222^{+22}_{-22} (-0.7\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} (-0.6\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5709^{+77}_{-74} (-0.4\sigma)$	$\chi_{\text{lensing}}^2$	$9.9 (\nu: 1.1) (-0.3\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2529^{+27}_{-27} (-0.4\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.06 (\nu: 0.5) (-0.6\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.37}$	$D_{1420}$	$814.8^{+9.5}_{-9.2} (+0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$12953.4 (\nu: 17.2)$
$A_{143}^{\text{dust}}$	$1.03^{+0.35}_{-0.36}$	$n_{s,0.002}$	$0.9687^{+0.0078}_{-0.0080} (+0.6\sigma)$	$\chi_{6\text{DF}}^2$	$0.037 (\nu: 0.0) (-0.2\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.22}$	$Y_{\text{P}}$	$0.24497^{+0.00013}_{-0.00012} (-6.0\sigma)$	$\chi_{\text{MGS}}^2$	$1.47 (\nu: 0.1) (+0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.34}$	$\text{Age/Gyr}$	$13.792^{+0.041}_{-0.042} (-0.5\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.72 (\nu: 0.1) (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.8\sigma)$	$z_*$	$1089.79^{+0.46}_{-0.46} (-0.7\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.57 (\nu: 0.1) (-0.3\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0035} (+0.7\sigma)$	$r_*$	$144.78^{+0.48}_{-0.47} (+0.0\sigma)$	$\chi_{\text{prior}}^2$	$9.1 (\nu: 6.3) (-1.9\sigma)$
$c_{TE}$	$1.0052^{+0.0086}_{-0.0084}$	$100\theta_*$	$1.04109^{+0.00056}_{-0.00056} (-0.0\sigma)$	$\chi_{\text{CMB}}^2$	$23458.3 (\nu: 17.0) (+1581.3\sigma)$
$c_{EE}$	$1.0014^{+0.0081}_{-0.0082}$	$z_{\text{drag}}$	$1059.82^{+0.62}_{-0.61} (+0.6\sigma)$	$\chi_{\text{BAO}}^2$	$4.80 (\nu: 0.2) (-0.1\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_{\text{drag}}$	$147.45^{+0.50}_{-0.48} (-0.1\sigma)$		
$H_0$	$67.82^{+0.93}_{-0.91} (+0.4\sigma)$	$k_D$	$0.14050^{+0.00058}_{-0.00061} (+0.4\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 23472.18; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.54; R - 1 = 0.00759$$

## 2.140 base\_CamSpecHM\_TTTEEE\_lowTEB\_lensing\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00031}_{-0.00031} \quad (+0.7\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.04110^{+0.00060}_{-0.00060} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1186^{+0.0027}_{-0.0026} \quad (-0.4\sigma)$	$H_0$	$67.9^{+1.2}_{-1.2} \quad (+0.4\sigma)$	$z_{\text{drag}}$	$1059.83^{+0.63}_{-0.63} \quad (+0.6\sigma)$
$100\theta_{\text{MC}}$	$1.04091^{+0.00060}_{-0.00060} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.692^{+0.016}_{-0.016} \quad (+0.4\sigma)$	$r_{\text{drag}}$	$147.46^{+0.59}_{-0.57} \quad (+0.1\sigma)$
$\tau$	$0.067^{+0.027}_{-0.027} \quad (+0.2\sigma)$	$\Omega_m$	$0.308^{+0.016}_{-0.016} \quad (-0.4\sigma)$	$k_D$	$0.14049^{+0.00063}_{-0.00065} \quad (+0.2\sigma)$
$\ln(10^{10} A_s)$	$3.063^{+0.050}_{-0.050} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1416^{+0.0025}_{-0.0025} \quad (-0.3\sigma)$	$100\theta_D$	$0.16078^{+0.00037}_{-0.00036} \quad (-0.8\sigma)$
$n_s$	$0.9689^{+0.0090}_{-0.0090} \quad (+0.7\sigma)$	$\Omega_m h^3$	$0.09608^{+0.00060}_{-0.00060} \quad (+0.4\sigma)$	$z_{\text{eq}}$	$3368^{+59}_{-59} \quad (-0.3\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0050}_{-0.0048} \quad (-0.0\sigma)$	$\sigma_8$	$0.815^{+0.018}_{-0.017} \quad (-0.0\sigma)$	$100\theta_{\text{eq}}$	$0.819^{+0.011}_{-0.011} \quad (+0.4\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.013}_{-0.013} \quad (-0.4\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07179^{+0.00092}_{-0.00089} \quad (+0.4\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.013}_{-0.013} \quad (-0.3\sigma)$	$H(0.57)$	$93.12^{+0.55}_{-0.52} \quad (+0.5\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$0.990^{+0.021}_{-0.021} \quad (-0.2\sigma)$	$D_A(0.57)$	$1384^{+16}_{-16} \quad (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.048}_{-0.049} \quad (-0.4\sigma)$	$F_{\text{AP}}(0.57)$	$0.6750^{+0.0041}_{-0.0040} \quad (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.73 \quad (-1.1\sigma)$	$z_{\text{re}}$	$8.9^{+2.6}_{-2.6} \quad (+0.2\sigma)$	$f\sigma_8(0.57)$	$0.4729^{+0.0099}_{-0.0099} \quad (-0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.21}$	$10^9 A_s$	$2.14^{+0.11}_{-0.10} \quad (+0.1\sigma)$	$\sigma_8(0.57)$	$0.607^{+0.015}_{-0.014} \quad (+0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.870^{+0.023}_{-0.023} \quad (-0.6\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24631^{+0.00013}_{-0.00014} \quad (-5.2\sigma)$
$A^{\text{kSZ}}$	—	$D_{40}$	$1222^{+23}_{-22} \quad (-0.8\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{220}$	$5710^{+76}_{-75} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.2^{+3.6}_{-3.6} \quad (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.35}_{-0.36}$	$D_{810}$	$2529^{+27}_{-27} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.22}$	$D_{1420}$	$814.9^{+9.5}_{-9.2} \quad (+0.0\sigma)$	$\chi_{\text{lensing}}^2$	$9.9 \quad (\nu: 1.1) \quad (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.34}$	$n_{s,0.002}$	$0.9689^{+0.0090}_{-0.0090} \quad (+0.7\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.1 \quad (\nu: 0.5) \quad (-0.6\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_{\text{P}}$	$0.24498^{+0.00014}_{-0.00013} \quad (-5.3\sigma)$	$\chi_{\text{CamSpec}}^2$	$12953.8 \quad (\nu: 17.8)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0035} \quad (+0.7\sigma)$	$\text{Age/Gyr}$	$13.791^{+0.049}_{-0.050} \quad (-0.5\sigma)$	$\chi_{\text{JLA}}^2$	$706.70 \quad (\nu: 0.0) \quad (-0.4\sigma)$
$c_{TE}$	$1.0052^{+0.0086}_{-0.0084}$	$z_*$	$1089.77^{+0.56}_{-0.56} \quad (-0.7\sigma)$	$\chi_{\text{prior}}^2$	$9.1 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{EE}$	$1.0014^{+0.0080}_{-0.0083}$	$r_*$	$144.80^{+0.59}_{-0.58} \quad (+0.2\sigma)$	$\chi_{\text{CMB}}^2$	$23458.8 \quad (\nu: 17.7) \quad (+1564.9\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 24174.51; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.59; R - 1 = 0.00795$$

## 2.141 base\_CamSpecHM\_TTTEEE\_lowTEB\_lensing\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00031}_{-0.00031} \quad (+0.7\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.04111^{+0.00060}_{-0.00060} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1185^{+0.0027}_{-0.0026} \quad (-0.4\sigma)$	$H_0$	$67.9^{+1.2}_{-1.2} \quad (+0.4\sigma)$	$z_{\text{drag}}$	$1059.85^{+0.62}_{-0.64} \quad (+0.6\sigma)$
$100\theta_{\text{MC}}$	$1.04092^{+0.00061}_{-0.00061} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.693^{+0.016}_{-0.017} \quad (+0.4\sigma)$	$r_{\text{drag}}$	$147.48^{+0.59}_{-0.58} \quad (+0.1\sigma)$
$\tau$	$0.068^{+0.027}_{-0.027} \quad (+0.2\sigma)$	$\Omega_m$	$0.307^{+0.017}_{-0.016} \quad (-0.4\sigma)$	$k_D$	$0.14049^{+0.00063}_{-0.00066} \quad (+0.2\sigma)$
$\ln(10^{10} A_s)$	$3.064^{+0.050}_{-0.050} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1415^{+0.0025}_{-0.0025} \quad (-0.3\sigma)$	$100\theta_D$	$0.16077^{+0.00037}_{-0.00036} \quad (-0.8\sigma)$
$n_s$	$0.9691^{+0.0091}_{-0.0091} \quad (+0.7\sigma)$	$\Omega_m h^3$	$0.09609^{+0.00060}_{-0.00060} \quad (+0.4\sigma)$	$z_{\text{eq}}$	$3367^{+60}_{-59} \quad (-0.3\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0050}_{-0.0048} \quad (-0.0\sigma)$	$\sigma_8$	$0.815^{+0.018}_{-0.017} \quad (-0.0\sigma)$	$100\theta_{\text{eq}}$	$0.820^{+0.012}_{-0.011} \quad (+0.4\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.013}_{-0.013} \quad (-0.4\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07182^{+0.00092}_{-0.00090} \quad (+0.4\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.013}_{-0.013} \quad (-0.3\sigma)$	$H(0.57)$	$93.14^{+0.55}_{-0.53} \quad (+0.5\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$0.990^{+0.021}_{-0.021} \quad (-0.2\sigma)$	$D_A(0.57)$	$1384^{+16}_{-16} \quad (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.048}_{-0.049} \quad (-0.4\sigma)$	$F_{\text{AP}}(0.57)$	$0.6749^{+0.0042}_{-0.0041} \quad (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.73 \quad (-1.1\sigma)$	$z_{\text{re}}$	$8.9^{+2.6}_{-2.6} \quad (+0.2\sigma)$	$f\sigma_8(0.57)$	$0.4729^{+0.0099}_{-0.0099} \quad (-0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.21}$	$10^9 A_s$	$2.14^{+0.11}_{-0.11} \quad (+0.1\sigma)$	$\sigma_8(0.57)$	$0.608^{+0.015}_{-0.015} \quad (+0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.870^{+0.023}_{-0.023} \quad (-0.6\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24631^{+0.00013}_{-0.00014} \quad (-5.2\sigma)$
$A^{\text{kSZ}}$	—	$D_{40}$	$1222^{+23}_{-22} \quad (-0.8\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{220}$	$5710^{+76}_{-75} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.1^{+3.6}_{-3.6} \quad (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.35}_{-0.36}$	$D_{810}$	$2529^{+27}_{-27} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.22}$	$D_{1420}$	$814.9^{+9.5}_{-9.2} \quad (+0.0\sigma)$	$\chi_{\text{lensing}}^2$	$9.9 \quad (\nu: 1.1) \quad (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.34}$	$n_{s,0.002}$	$0.9691^{+0.0091}_{-0.0091} \quad (+0.7\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.1 \quad (\nu: 0.5) \quad (-0.6\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_{\text{P}}$	$0.24498^{+0.00014}_{-0.00013} \quad (-5.3\sigma)$	$\chi_{\text{CamSpec}}^2$	$12953.8 \quad (\nu: 17.9)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0035} \quad (+0.7\sigma)$	$\text{Age/Gyr}$	$13.790^{+0.049}_{-0.050} \quad (-0.5\sigma)$	$\chi_{\text{H070p6}}^2$	$0.70 \quad (\nu: 0.0) \quad (-0.4\sigma)$
$c_{TE}$	$1.0051^{+0.0086}_{-0.0084}$	$z_*$	$1089.76^{+0.56}_{-0.56} \quad (-0.7\sigma)$	$\chi_{\text{prior}}^2$	$9.1 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{EE}$	$1.0013^{+0.0080}_{-0.0083}$	$r_*$	$144.81^{+0.59}_{-0.59} \quad (+0.2\sigma)$	$\chi_{\text{CMB}}^2$	$23458.8 \quad (\nu: 17.9) \quad (+1563.4\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 23468.55; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.55; R - 1 = 0.00822$$

2.142 base\_CamSpecHM\_TTTEEE\_lowTEB\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00028}_{-0.00028} (+0.6\sigma)$	$\Omega_\Lambda$	$0.693^{+0.012}_{-0.012} (+0.3\sigma)$	$100\theta_D$	$0.16077^{+0.00036}_{-0.00035} (-0.8\sigma)$
$\Omega_c h^2$	$0.1185^{+0.0020}_{-0.0020} (-0.3\sigma)$	$\Omega_m$	$0.307^{+0.012}_{-0.012} (-0.3\sigma)$	$z_{\text{eq}}$	$3366^{+45}_{-45} (-0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04092^{+0.00056}_{-0.00056} (-0.0\sigma)$	$\Omega_m h^2$	$0.1415^{+0.0019}_{-0.0019} (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.8198^{+0.0086}_{-0.0084} (+0.2\sigma)$
$\tau$	$0.068^{+0.024}_{-0.024} (+0.1\sigma)$	$\Omega_m h^3$	$0.09609^{+0.00060}_{-0.00060} (+0.4\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07182^{+0.00068}_{-0.00066} (+0.3\sigma)$
$\ln(10^{10} A_s)$	$3.064^{+0.045}_{-0.046} (-0.0\sigma)$	$\sigma_8$	$0.815^{+0.017}_{-0.017} (-0.1\sigma)$	$H(0.57)$	$93.14^{+0.42}_{-0.41} (+0.4\sigma)$
$n_s$	$0.9692^{+0.0077}_{-0.0079} (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.012}_{-0.012} (-0.3\sigma)$	$D_A(0.57)$	$1384^{+12}_{-12} (-0.4\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0050}_{-0.0048} (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.013}_{-0.013} (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6749^{+0.0030}_{-0.0030} (-0.3\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.990^{+0.020}_{-0.021} (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.4729^{+0.0099}_{-0.0098} (-0.2\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.048}_{-0.049} (-0.4\sigma)$	$\sigma_8(0.57)$	$0.608^{+0.014}_{-0.014} (+0.0\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} (+0.1\sigma)$	$z_{\text{re}}$	$8.9^{+2.3}_{-2.4} (+0.1\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24631^{+0.00012}_{-0.00012} (-6.0\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} (-2.9\sigma)$	$10^9 A_s$	$2.142^{+0.098}_{-0.096} (-0.0\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} (-0.5\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.73 (-1.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.022}_{-0.022} (-0.6\sigma)$	$f_{2000}^{217}$	$106.1^{+3.5}_{-3.6} (+0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{40}$	$1222^{+22}_{-21} (-0.7\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} (-0.6\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5710^{+76}_{-74} (-0.5\sigma)$	$\chi_{\text{lensing}}^2$	$9.8 (\nu: 1.0) (-0.3\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2529^{+27}_{-27} (-0.4\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.02 (\nu: 0.5) (-0.6\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{1420}$	$814.9^{+9.4}_{-9.2} (-0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$12953.5 (\nu: 17.3)$
$A_{143}^{\text{dust}}$	$1.03^{+0.35}_{-0.36}$	$n_{\text{s},0.002}$	$0.9692^{+0.0077}_{-0.0079} (+0.6\sigma)$	$\chi_{\text{H070p6}}^2$	$0.68 (\nu: 0.0) (-0.3\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.22}$	$Y_{\text{P}}$	$0.24498^{+0.00013}_{-0.00012} (-6.1\sigma)$	$\chi_{\text{JLA}}^2$	$706.66 (\nu: 0.0) (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.34}$	$\text{Age/Gyr}$	$13.789^{+0.041}_{-0.041} (-0.5\sigma)$	$\chi_{6\text{DF}}^2$	$0.031 (\nu: 0.0) (-0.2\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.8\sigma)$	$z_*$	$1089.75^{+0.45}_{-0.45} (-0.7\sigma)$	$\chi_{\text{MGS}}^2$	$1.55 (\nu: 0.1) (+0.3\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0035} (+0.7\sigma)$	$r_*$	$144.81^{+0.47}_{-0.46} (+0.0\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.70 (\nu: 0.1) (-0.0\sigma)$
$c_{TE}$	$1.0051^{+0.0085}_{-0.0084}$	$100\theta_*$	$1.04112^{+0.00056}_{-0.00056} (-0.0\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.50 (\nu: 0.1) (-0.3\sigma)$
$c_{EE}$	$1.0013^{+0.0081}_{-0.0082}$	$z_{\text{drag}}$	$1059.85^{+0.62}_{-0.59} (+0.6\sigma)$	$\chi_{\text{prior}}^2$	$9.1 (\nu: 6.3) (-1.9\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$r_{\text{drag}}$	$147.48^{+0.50}_{-0.48} (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$23458.3 (\nu: 17.1) (+1580.5\sigma)$
$H_0$	$67.90^{+0.91}_{-0.89} (+0.4\sigma)$	$k_D$	$0.14049^{+0.00059}_{-0.00061} (+0.4\sigma)$	$\chi_{\text{BAO}}^2$	$4.78 (\nu: 0.2) (-0.0\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 24179.52; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.42; R - 1 = 0.00745$$

### 2.143 base\_CamSpecHM\_TTTEEE\_lowTEB\_lensing\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00031}_{-0.00031} \quad (+0.7\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.04110^{+0.00059}_{-0.00059} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1186^{+0.0026}_{-0.0026} \quad (-0.4\sigma)$	$H_0$	$67.8^{+1.2}_{-1.2} \quad (+0.5\sigma)$	$z_{\text{drag}}$	$1059.83^{+0.64}_{-0.62} \quad (+0.6\sigma)$
$100\theta_{\text{MC}}$	$1.04090^{+0.00060}_{-0.00060} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.692^{+0.016}_{-0.016} \quad (+0.4\sigma)$	$r_{\text{drag}}$	$147.46^{+0.59}_{-0.56} \quad (+0.1\sigma)$
$\tau$	$0.068^{+0.023}_{-0.024} \quad (+0.2\sigma)$	$\Omega_m$	$0.308^{+0.016}_{-0.016} \quad (-0.4\sigma)$	$k_D$	$0.14050^{+0.00063}_{-0.00065} \quad (+0.2\sigma)$
$\ln(10^{10} A_s)$	$3.064^{+0.045}_{-0.045} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1416^{+0.0024}_{-0.0025} \quad (-0.3\sigma)$	$100\theta_D$	$0.16078^{+0.00037}_{-0.00036} \quad (-0.8\sigma)$
$n_s$	$0.9689^{+0.0090}_{-0.0087} \quad (+0.7\sigma)$	$\Omega_m h^3$	$0.09608^{+0.00060}_{-0.00060} \quad (+0.4\sigma)$	$z_{\text{eq}}$	$3369^{+58}_{-59} \quad (-0.3\sigma)$
$y_{\text{cal}}$	$1.0000^{+0.0049}_{-0.0048} \quad (-0.0\sigma)$	$\sigma_8$	$0.816^{+0.017}_{-0.016} \quad (-0.0\sigma)$	$100\theta_{\text{eq}}$	$0.819^{+0.012}_{-0.011} \quad (+0.4\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.013}_{-0.013} \quad (-0.4\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07178^{+0.00092}_{-0.00086} \quad (+0.4\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.013}_{-0.013} \quad (-0.3\sigma)$	$H(0.57)$	$93.11^{+0.55}_{-0.51} \quad (+0.5\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$0.990^{+0.020}_{-0.019} \quad (-0.2\sigma)$	$D_A(0.57)$	$1384^{+16}_{-16} \quad (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.448^{+0.047}_{-0.047} \quad (-0.4\sigma)$	$F_{\text{AP}}(0.57)$	$0.6751^{+0.0040}_{-0.0041} \quad (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.72 \quad (-1.1\sigma)$	$z_{\text{re}}$	$< 10.9 \quad (+0.2\sigma)$	$f\sigma_8(0.57)$	$0.4733^{+0.0097}_{-0.0092} \quad (-0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.21}$	$10^9 A_s$	$2.142^{+0.097}_{-0.095} \quad (+0.1\sigma)$	$\sigma_8(0.57)$	$0.608^{+0.013}_{-0.013} \quad (+0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.870^{+0.023}_{-0.023} \quad (-0.6\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24630^{+0.00013}_{-0.00013} \quad (-5.3\sigma)$
$A^{\text{kSZ}}$	—	$D_{40}$	$1222^{+23}_{-22} \quad (-0.8\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{220}$	$5709^{+76}_{-75} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.2^{+3.5}_{-3.6} \quad (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.35}_{-0.36}$	$D_{810}$	$2529^{+27}_{-26} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$D_{1420}$	$814.7^{+9.5}_{-9.1} \quad (+0.0\sigma)$	$\chi_{\text{lensing}}^2$	$9.9 \quad (\nu: 1.1) \quad (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.34}$	$n_{s,0.002}$	$0.9689^{+0.0090}_{-0.0087} \quad (+0.7\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.1 \quad (\nu: 0.5) \quad (-0.7\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_{\text{P}}$	$0.24497^{+0.00014}_{-0.00013} \quad (-5.3\sigma)$	$\chi_{\text{CamSpec}}^2$	$12953.6 \quad (\nu: 17.7)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0035} \quad (+0.7\sigma)$	$\text{Age/Gyr}$	$13.792^{+0.048}_{-0.050} \quad (-0.5\sigma)$	$\chi_{\text{prior}}^2$	$9.1 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{TE}$	$1.0051^{+0.0085}_{-0.0084}$	$z_*$	$1089.78^{+0.55}_{-0.56} \quad (-0.7\sigma)$	$\chi_{\text{CMB}}^2$	$23458.6 \quad (\nu: 17.5) \quad (+1580.4\sigma)$
$c_{EE}$	$1.0013^{+0.0080}_{-0.0082}$	$r_*$	$144.79^{+0.59}_{-0.57} \quad (+0.2\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 23467.67; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.74; R - 1 = 0.00791$$



2.144 base\_CamSpecHM\_TTTEEE\_lowTEB\_lensing\_post\_BAO\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00028}_{-0.00028} (+0.6\sigma)$	$\Omega_\Lambda$	$0.692^{+0.012}_{-0.012} (+0.3\sigma)$	$100\theta_D$	$0.16078^{+0.00036}_{-0.00035} (-0.8\sigma)$
$\Omega_c h^2$	$0.1186^{+0.0020}_{-0.0020} (-0.3\sigma)$	$\Omega_m$	$0.308^{+0.012}_{-0.012} (-0.3\sigma)$	$z_{\text{eq}}$	$3369^{+45}_{-45} (-0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04090^{+0.00056}_{-0.00056} (-0.0\sigma)$	$\Omega_m h^2$	$0.1416^{+0.0019}_{-0.0019} (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.8192^{+0.0087}_{-0.0085} (+0.3\sigma)$
$\tau$	$0.067^{+0.022}_{-0.023} (+0.1\sigma)$	$\Omega_m h^3$	$0.09608^{+0.00060}_{-0.00060} (+0.4\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07177^{+0.00069}_{-0.00066} (+0.3\sigma)$
$\ln(10^{10} A_s)$	$3.064^{+0.042}_{-0.042} (-0.0\sigma)$	$\sigma_8$	$0.816^{+0.017}_{-0.016} (-0.1\sigma)$	$H(0.57)$	$93.11^{+0.43}_{-0.41} (+0.4\sigma)$
$n_s$	$0.9688^{+0.0077}_{-0.0079} (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.012}_{-0.012} (-0.3\sigma)$	$D_A(0.57)$	$1385^{+12}_{-12} (-0.4\sigma)$
$y_{\text{cal}}$	$1.0000^{+0.0050}_{-0.0048} (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.013}_{-0.012} (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6751^{+0.0031}_{-0.0030} (-0.3\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.990^{+0.020}_{-0.019} (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.4733^{+0.0096}_{-0.0091} (-0.2\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.447^{+0.047}_{-0.046} (-0.4\sigma)$	$\sigma_8(0.57)$	$0.608^{+0.013}_{-0.013} (+0.0\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} (+0.1\sigma)$	$z_{\text{re}}$	$8.9^{+2.0}_{-2.2} (+0.1\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24630^{+0.00012}_{-0.00012} (-5.9\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} (-2.9\sigma)$	$10^9 A_s$	$2.141^{+0.091}_{-0.090} (-0.0\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} (-0.5\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.72 (-1.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.022}_{-0.022} (-0.6\sigma)$	$f_{2000}^{217}$	$106.2^{+3.5}_{-3.6} (+0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{40}$	$1222^{+22}_{-21} (-0.8\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} (-0.6\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5709^{+76}_{-74} (-0.5\sigma)$	$\chi_{\text{lensing}}^2$	$9.9 (\nu: 1.1) (-0.3\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2529^{+27}_{-26} (-0.4\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.03 (\nu: 0.5) (-0.6\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.37}$	$D_{1420}$	$814.7^{+9.4}_{-9.2} (-0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$12953.3 (\nu: 17.1)$
$A_{143}^{\text{dust}}$	$1.03^{+0.35}_{-0.36}$	$n_{s,0.002}$	$0.9688^{+0.0077}_{-0.0079} (+0.6\sigma)$	$\chi_{6\text{DF}}^2$	$0.035 (\nu: 0.0) (-0.2\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.22}$	$Y_{\text{P}}$	$0.24497^{+0.00012}_{-0.00012} (-6.0\sigma)$	$\chi_{\text{MGS}}^2$	$1.49 (\nu: 0.1) (+0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.34}$	$\text{Age/Gyr}$	$13.792^{+0.041}_{-0.042} (-0.5\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.70 (\nu: 0.1) (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.8\sigma)$	$z_*$	$1089.78^{+0.45}_{-0.45} (-0.7\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.55 (\nu: 0.1) (-0.3\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0035} (+0.7\sigma)$	$r_*$	$144.79^{+0.48}_{-0.46} (+0.0\sigma)$	$\chi_{\text{prior}}^2$	$9.0 (\nu: 6.3) (-1.9\sigma)$
$c_{TE}$	$1.0051^{+0.0085}_{-0.0084}$	$100\theta_*$	$1.04110^{+0.00056}_{-0.00056} (-0.0\sigma)$	$\chi_{\text{CMB}}^2$	$23458.2 (\nu: 16.9) (+1587.2\sigma)$
$c_{EE}$	$1.0014^{+0.0081}_{-0.0082}$	$z_{\text{drag}}$	$1059.83^{+0.62}_{-0.62} (+0.6\sigma)$	$\chi_{\text{BAO}}^2$	$4.78 (\nu: 0.2) (-0.1\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_{\text{drag}}$	$147.46^{+0.50}_{-0.48} (-0.1\sigma)$		
$H_0$	$67.84^{+0.92}_{-0.89} (+0.4\sigma)$	$k_D$	$0.14050^{+0.00058}_{-0.00061} (+0.4\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 23472.04; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.54; R - 1 = 0.00752$$

## 2.145 base\_CamSpecHM\_TTTEEE\_lowTEB\_lensing\_post\_reion

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00029}_{-0.00029} \quad (+0.7\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.04101^{+0.00056}_{-0.00057} \quad (+0.0\sigma)$
$\Omega_c h^2$	$0.1194^{+0.0023}_{-0.0023} \quad (-0.4\sigma)$	$H_0$	$67.5^{+1.0}_{-1.0} \quad (+0.5\sigma)$	$z_{\text{drag}}$	$1059.75^{+0.61}_{-0.62} \quad (+0.6\sigma)$
$100\theta_{\text{MC}}$	$1.04081^{+0.00056}_{-0.00058} \quad (+0.0\sigma)$	$\Omega_\Lambda$	$0.687^{+0.014}_{-0.014} \quad (+0.4\sigma)$	$r_{\text{drag}}$	$147.32^{+0.55}_{-0.51} \quad (+0.0\sigma)$
$\tau$	$< 0.0685 \quad (+0.1\sigma)$	$\Omega_m$	$0.313^{+0.014}_{-0.014} \quad (-0.4\sigma)$	$k_D$	$0.14060^{+0.00059}_{-0.00061} \quad (+0.3\sigma)$
$\ln(10^{10} A_s)$	$3.042^{+0.029}_{-0.026} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1423^{+0.0022}_{-0.0022} \quad (-0.3\sigma)$	$100\theta_D$	$0.16082^{+0.00036}_{-0.00034} \quad (-0.8\sigma)$
$n_s$	$0.9664^{+0.0081}_{-0.0078} \quad (+0.7\sigma)$	$\Omega_m h^3$	$0.09606^{+0.00059}_{-0.00059} \quad (+0.4\sigma)$	$z_{\text{eq}}$	$3386^{+53}_{-53} \quad (-0.3\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0048} \quad (+0.0\sigma)$	$\sigma_8$	$0.809^{+0.012}_{-0.011} \quad (-0.3\sigma)$	$100\theta_{\text{eq}}$	$0.816^{+0.010}_{-0.0098} \quad (+0.4\sigma)$
$A_{100}^{\text{PS}}$	$248^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.013}_{-0.013} \quad (-0.4\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07151^{+0.00079}_{-0.00077} \quad (+0.4\sigma)$
$A_{143}^{\text{PS}}$	$39^{+10}_{-10} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.012}_{-0.013} \quad (-0.4\sigma)$	$H(0.57)$	$92.97^{+0.48}_{-0.46} \quad (+0.5\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.985^{+0.017}_{-0.017} \quad (-0.4\sigma)$	$D_A(0.57)$	$1389^{+14}_{-14} \quad (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.434^{+0.041}_{-0.041} \quad (-0.6\sigma)$	$F_{\text{AP}}(0.57)$	$0.6763^{+0.0036}_{-0.0036} \quad (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.59 \quad (-1.1\sigma)$	$z_{\text{re}}$	$< 9.05 \quad (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.4706^{+0.0081}_{-0.0085} \quad (-0.4\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$10^9 A_s$	$2.096^{+0.060}_{-0.054} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.6016^{+0.0087}_{-0.0080} \quad (-0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.875^{+0.021}_{-0.021} \quad (-0.6\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24628^{+0.00012}_{-0.00013} \quad (-5.5\sigma)$
$A^{\text{kSZ}}$	—	$D_{40}$	$1224^{+23}_{-22} \quad (-0.8\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.39}_{-0.37}$	$D_{220}$	$5713^{+77}_{-75} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.6^{+3.5}_{-3.6} \quad (+0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$D_{810}$	$2532^{+26}_{-25} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.6\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$D_{1420}$	$815.0^{+9.5}_{-9.0} \quad (+0.1\sigma)$	$\chi_{\text{lensing}}^2$	$9.37 \quad (\nu: 0.3) \quad (-0.4\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.34}$	$n_{s,0.002}$	$0.9664^{+0.0081}_{-0.0078} \quad (+0.7\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.02 \quad (\nu: 0.4) \quad (-0.8\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_{\text{P}}$	$0.24495^{+0.00013}_{-0.00012} \quad (-5.6\sigma)$	$\chi_{\text{CamSpec}}^2$	$12954.2 \quad (\nu: 16.7)$
$c_{217}$	$0.9972^{+0.0034}_{-0.0034} \quad (+0.8\sigma)$	$\text{Age/Gyr}$	$13.803^{+0.046}_{-0.046} \quad (-0.5\sigma)$	$\chi_{\text{prior}}^2$	$10.2 \quad (\nu: 7.3) \quad (-1.8\sigma)$
$c_{TE}$	$1.0057^{+0.0087}_{-0.0085}$	$z_*$	$1089.92^{+0.52}_{-0.50} \quad (-0.7\sigma)$	$\chi_{\text{CMB}}^2$	$23458.5 \quad (\nu: 16.5) \quad (+1609.9\sigma)$
$c_{EE}$	$1.0015^{+0.0081}_{-0.0083}$	$r_*$	$144.64^{+0.54}_{-0.51} \quad (+0.2\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 23468.74; \Delta\bar{\chi}_{\text{eff}}^2 = 10489.08; R - 1 = 0.01871$$

## 2.146 base\_lenonly

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02215	$0.0223^{+0.0017}_{-0.0017}$	$10^9 A_s$	2.28	$2.16^{+0.65}_{-0.60}$	$z_{\text{drag}}$	1059.09	$1059.4^{+4.5}_{-4.9}$
$\Omega_c h^2$	0.1155	$0.116^{+0.027}_{-0.026}$	$10^9 A_s e^{-2\tau}$	1.98	$1.88^{+0.57}_{-0.52}$	$r_{\text{drag}}$	148.5	$148.4^{+7.4}_{-7.7}$
$100\theta_{\text{MC}}$	1.062	$1.035^{+0.099}_{-0.098}$	$D_{40}$	1352	$1263^{+400}_{-400}$	$k_{\text{D}}$	0.1392	$0.1395^{+0.0087}_{-0.0087}$
$\ln(10^{10} A_s)$	3.128	$3.06^{+0.28}_{-0.28}$	$D_{220}$	6163	$5844^{+2000}_{-2000}$	$100\theta_{\text{D}}$	0.1645	$0.160^{+0.015}_{-0.015}$
$n_s$	0.9595	$0.959^{+0.039}_{-0.038}$	$D_{810}$	2667	$2374^{+900}_{-800}$	$z_{\text{eq}}$	3289	$3311^{+700}_{-600}$
$H_0$	76.2	—	$D_{1420}$	840	$737^{+300}_{-300}$	$k_{\text{eq}}$	0.01004	$0.0101^{+0.0020}_{-0.0019}$
$\Omega_\Lambda$	0.762	$0.64^{+0.28}_{-0.40}$	$D_{2000}$	238	$235^{+100}_{-100}$	$100\theta_{\text{eq}}$	0.851	$0.83^{+0.11}_{-0.10}$
$\Omega_m$	0.238	$0.36^{+0.40}_{-0.28}$	$n_{s,0.002}$	0.9595	$0.959^{+0.039}_{-0.038}$	$100\theta_{s,\text{eq}}$	0.470	$0.457^{+0.057}_{-0.053}$
$\Omega_m h^2$	0.1383	$0.139^{+0.028}_{-0.026}$	$Y_{\text{P}}$	0.24529	$0.24534^{+0.00075}_{-0.00081}$	$r_{\text{drag}}/D_{\text{V}}(0.57)$	0.0782	$0.072^{+0.023}_{-0.021}$
$\Omega_m h^3$	0.105	$0.095^{+0.055}_{-0.049}$	$Y_{\text{P}}^{\text{BBN}}$	0.24662	$0.24667^{+0.00075}_{-0.00081}$	$H(0.57)$	98.9	$93^{+30}_{-20}$
$\sigma_8$	0.845	$0.79^{+0.16}_{-0.17}$	$10^5 \text{D}/\text{H}$	2.632	$2.62^{+0.35}_{-0.33}$	$D_{\text{A}}(0.57)$	1268	$1437^{+500}_{-500}$
$\sigma_8 \Omega_m^{0.5}$	0.413	$0.45^{+0.12}_{-0.11}$	Age/Gyr	13.18	$14.1^{+3.3}_{-3.0}$	$F_{\text{AP}}(0.57)$	0.656	$0.684^{+0.082}_{-0.065}$
$\sigma_8 \Omega_m^{0.25}$	0.5904	$0.591^{+0.043}_{-0.041}$	$z_*$	1089.79	$1089.7^{+3.0}_{-3.0}$	$f\sigma_8(0.57)$	0.467	$0.451^{+0.047}_{-0.059}$
$\sigma_8/h^{0.5}$	0.9682	$0.969^{+0.044}_{-0.044}$	$r_*$	145.8	$145.6^{+7.0}_{-7.4}$	$\sigma_8(0.57)$	0.649	$0.59^{+0.17}_{-0.18}$
$\langle d^2 \rangle^{1/2}$	2.460	$2.46^{+0.12}_{-0.11}$	$100\theta_*$	1.063	$1.035^{+0.099}_{-0.098}$	$\chi^2_{\text{lensing}}$	8.44	10.6 ( $\nu$ : 2.1)
$z_{\text{re}}$	9.22	$9.16^{+0.78}_{-0.78}$	$D_{\text{A}}/\text{Gpc}$	13.72	$14.1^{+2.0}_{-1.9}$	$\chi^2_{\text{prior}}$	0.00	2.0 ( $\nu$ : 1.9)

Best-fit  $\chi^2_{\text{eff}} = 8.44$ ;  $\bar{\chi}^2_{\text{eff}} = 12.52$ ;  $R - 1 = 0.00540$   
 $\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp\_lenonly: 8.44

## 2.147 base\_lenonly\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02233	$0.0223^{+0.0017}_{-0.0017}$	$D_{40}$	1237	$1219^{+300}_{-300}$	$z_{\text{eq}}$	3342	$3409^{+600}_{-600}$
$\Omega_c h^2$	0.1175	$0.120^{+0.026}_{-0.025}$	$D_{220}$	5716	$5615^{+2000}_{-2000}$	$k_{\text{eq}}$	0.01020	$0.0104^{+0.0019}_{-0.0018}$
$100\theta_{\text{MC}}$	1.0396	$1.043^{+0.033}_{-0.031}$	$D_{810}$	2490	$2437^{+600}_{-600}$	$100\theta_{\text{eq}}$	0.823	$0.817^{+0.081}_{-0.081}$
$\ln(10^{10} A_s)$	3.056	$3.04^{+0.21}_{-0.22}$	$D_{1420}$	797	$775^{+200}_{-200}$	$100\theta_{s,\text{eq}}$	0.4544	$0.451^{+0.042}_{-0.042}$
$n_s$	0.9581	$0.957^{+0.039}_{-0.040}$	$D_{2000}$	224	$221^{+60}_{-50}$	$r_{\text{drag}}/D_V(0.57)$	0.07178	$0.0718^{+0.0011}_{-0.0011}$
$H_0$	67.75	$68.0^{+2.9}_{-2.7}$	$n_{s,0.002}$	0.9581	$0.957^{+0.039}_{-0.040}$	$H(0.57)$	92.9	$93.4^{+5.8}_{-5.6}$
$\Omega_\Lambda$	0.6938	$0.690^{+0.038}_{-0.039}$	$Y_P$	0.24537	$0.24534^{+0.00074}_{-0.00079}$	$D_A(0.57)$	1387	$1381^{+67}_{-69}$
$\Omega_m$	0.3062	$0.310^{+0.039}_{-0.038}$	$Y_P^{\text{BBN}}$	0.24670	$0.24667^{+0.00074}_{-0.00079}$	$F_{\text{AP}}(0.57)$	0.6747	$0.6755^{+0.0098}_{-0.0097}$
$\Omega_m h^2$	0.1405	$0.143^{+0.026}_{-0.025}$	$10^5 D/H$	2.599	$2.62^{+0.34}_{-0.33}$	$f\sigma_8(0.57)$	0.4663	$0.468^{+0.027}_{-0.027}$
$\Omega_m h^3$	0.0952	$0.098^{+0.022}_{-0.020}$	Age/Gyr	13.83	$13.76^{+0.87}_{-0.89}$	$\sigma_8(0.57)$	0.5997	$0.600^{+0.024}_{-0.024}$
$\sigma_8$	0.8044	$0.806^{+0.037}_{-0.037}$	$z_*$	1089.76	$1090.1^{+3.1}_{-2.8}$	$\chi^2_{\text{lensing}}$	8.55	10.6 ( $\nu$ : 2.2)
$\sigma_8 \Omega_m^{0.5}$	0.4451	$0.448^{+0.042}_{-0.040}$	$r_*$	145.1	$144.5^{+6.3}_{-6.8}$	$\chi^2_{6\text{DF}}$	0.006	0.07 ( $\nu$ : 0.0)
$\sigma_8 \Omega_m^{0.25}$	0.5983	$0.601^{+0.040}_{-0.039}$	$100\theta_*$	1.0398	$1.043^{+0.033}_{-0.031}$	$\chi^2_{\text{MGS}}$	1.47	1.56 ( $\nu$ : 0.3)
$\sigma_8/h^{0.5}$	0.9773	$0.978^{+0.038}_{-0.038}$	$D_A/\text{Gpc}$	13.96	$13.9^{+1.0}_{-1.1}$	$\chi^2_{\text{DR11CMass}}$	2.45	3.1 ( $\nu$ : 0.7)
$\langle d^2 \rangle^{1/2}$	2.453	$2.44^{+0.11}_{-0.10}$	$z_{\text{drag}}$	1059.67	$1059.7^{+4.4}_{-4.6}$	$\chi^2_{\text{DR11LOWZ}}$	0.44	0.63 ( $\nu$ : 0.2)
$z_{\text{re}}$	9.18	$9.25^{+0.71}_{-0.66}$	$r_{\text{drag}}$	147.8	$147.2^{+6.7}_{-7.1}$	$\chi^2_{\text{prior}}$	0.01	2.0 ( $\nu$ : 1.9)
$10^9 A_s$	2.124	$2.10^{+0.48}_{-0.42}$	$k_D$	0.1401	$0.1407^{+0.0082}_{-0.0075}$	$\chi^2_{\text{BAO}}$	4.37	5.4 ( $\nu$ : 1.3)
$10^9 A_s e^{-2\tau}$	1.846	$1.82^{+0.42}_{-0.37}$	$100\theta_D$	0.16069	$0.1612^{+0.0049}_{-0.0045}$			

Best-fit  $\chi^2_{\text{eff}} = 12.93$ ;  $\bar{\chi}^2_{\text{eff}} = 17.98$ ;  $R - 1 = 0.00533$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMass: 2.45 DR11LOWZ: 0.44 CMB - smica\_g30\_ftl\_full\_pp\_lenonly: 8.55

## 2.148 base\_lenonly\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02228	$0.0223^{+0.0017}_{-0.0017}$	$10^9 A_s e^{-2\tau}$	1.97	$1.92^{+0.52}_{-0.48}$	$r_{\text{drag}}$	149.2	$148.5^{+6.1}_{-6.5}$
$\Omega_c h^2$	0.1125	$0.115^{+0.022}_{-0.021}$	$D_{40}$	1321	$1296^{+400}_{-400}$	$k_D$	0.1386	$0.1394^{+0.0076}_{-0.0070}$
$\ln(10^{10} A_s)$	3.119	$3.09^{+0.26}_{-0.25}$	$D_{220}$	6190	$6040^{+2000}_{-2000}$	$100\theta_D$	0.16112	$0.1610^{+0.0027}_{-0.0027}$
$n_s$	0.9634	$0.960^{+0.040}_{-0.041}$	$D_{810}$	2673	$2605^{+800}_{-700}$	$z_{\text{eq}}$	3221	$3291^{+500}_{-500}$
$H_0$	70.0	$69^{+8}_{-8}$	$D_{1420}$	854	$832^{+200}_{-200}$	$k_{\text{eq}}$	0.00983	$0.0100^{+0.0016}_{-0.0016}$
$\Omega_\Lambda$	0.723	$0.71^{+0.11}_{-0.12}$	$D_{2000}$	240	$234^{+70}_{-60}$	$100\theta_{\text{eq}}$	0.847	$0.837^{+0.10}_{-0.094}$
$\Omega_m$	0.277	$0.29^{+0.12}_{-0.11}$	$n_{s,0.002}$	0.9634	$0.960^{+0.040}_{-0.041}$	$100\theta_{s,\text{eq}}$	0.467	$0.462^{+0.051}_{-0.049}$
$\Omega_m h^2$	0.1354	$0.138^{+0.022}_{-0.021}$	$Y_P$	0.24535	$0.24536^{+0.00075}_{-0.00080}$	$r_{\text{drag}}/D_V(0.57)$	0.0737	$0.0731^{+0.0072}_{-0.0065}$
$\Omega_m h^3$	0.0948	$0.0953^{+0.0055}_{-0.0052}$	$Y_P^{\text{BBN}}$	0.24668	$0.24668^{+0.00075}_{-0.00081}$	$H(0.57)$	93.72	$93.7^{+2.9}_{-2.6}$
$\sigma_8$	0.8145	$0.807^{+0.040}_{-0.043}$	$10^5 D/H$	2.609	$2.61^{+0.35}_{-0.34}$	$D_A(0.57)$	1359	$1369^{+96}_{-95}$
$\sigma_8 \Omega_m^{0.5}$	0.428	$0.435^{+0.070}_{-0.066}$	Age/Gyr	13.775	$13.78^{+0.19}_{-0.19}$	$F_{\text{AP}}(0.57)$	0.6670	$0.671^{+0.030}_{-0.028}$
$\sigma_8 \Omega_m^{0.25}$	0.5908	$0.592^{+0.041}_{-0.043}$	$z_*$	1089.37	$1089.6^{+2.8}_{-2.7}$	$f\sigma_8(0.57)$	0.4638	$0.462^{+0.023}_{-0.025}$
$\sigma_8/h^{0.5}$	0.9738	$0.971^{+0.039}_{-0.043}$	$r_*$	146.5	$145.8^{+5.7}_{-6.0}$	$\sigma_8(0.57)$	0.615	$0.606^{+0.055}_{-0.055}$
$\langle d^2 \rangle^{1/2}$	2.467	$2.46^{+0.11}_{-0.10}$	$100\theta_*$	1.041009	$1.04100^{+0.00020}_{-0.00019}$	$\chi^2_{\text{lensing}}$	8.44	$10.4 (\nu: 1.8)$
$z_{\text{re}}$	9.09	$9.14^{+0.60}_{-0.58}$	$D_A/\text{Gpc}$	14.07	$14.00^{+0.55}_{-0.58}$	$\chi^2_{\text{prior}}$	0.00	$2.0 (\nu: 2.0)$
$10^9 A_s$	2.26	$2.21^{+0.60}_{-0.55}$	$z_{\text{drag}}$	1059.17	$1059.4^{+4.4}_{-4.8}$			

Best-fit  $\chi^2_{\text{eff}} = 8.45$ ;  $\bar{\chi}^2_{\text{eff}} = 12.43$ ;  $R - 1 = 0.00399$   
 $\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp\_lenonly: 8.44

## 2.149 base\_lenonly\_BAO\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02234	$0.0223^{+0.0018}_{-0.0018}$	$D_{220}$	5661	$5635^{+440}_{-420}$	$k_{\text{eq}}$	0.010270	$0.01027^{+0.00031}_{-0.00031}$
$\Omega_c h^2$	0.11847	$0.1185^{+0.0035}_{-0.0034}$	$D_{810}$	2476	$2467^{+180}_{-180}$	$100\theta_{\text{eq}}$	0.8198	$0.820^{+0.016}_{-0.016}$
$\ln(10^{10} A_s)$	3.051	$3.046^{+0.069}_{-0.064}$	$D_{1420}$	793	$790^{+71}_{-65}$	$100\theta_{s,\text{eq}}$	0.4528	$0.4530^{+0.0090}_{-0.0087}$
$n_s$	0.9588	$0.959^{+0.037}_{-0.038}$	$D_{2000}$	223.4	$222^{+23}_{-21}$	$r_{\text{drag}}/D_V(0.57)$	0.07179	$0.0718^{+0.0010}_{-0.0010}$
$H_0$	67.83	$67.8^{+1.6}_{-1.6}$	$n_{s,0.002}$	0.9588	$0.959^{+0.037}_{-0.038}$	$H(0.57)$	93.07	$93.0^{+1.3}_{-1.3}$
$\Omega_\Lambda$	0.6925	$0.692^{+0.017}_{-0.018}$	$Y_P$	0.24538	$0.24534^{+0.00077}_{-0.00083}$	$D_A(0.57)$	1384.9	$1386^{+25}_{-25}$
$\Omega_m$	0.3075	$0.308^{+0.018}_{-0.017}$	$Y_P^{\text{BBN}}$	0.24671	$0.24667^{+0.00077}_{-0.00083}$	$F_{\text{AP}}(0.57)$	0.67501	$0.6751^{+0.0046}_{-0.0045}$
$\Omega_m h^2$	0.14146	$0.1414^{+0.0043}_{-0.0043}$	$10^5 D/H$	2.597	$2.62^{+0.36}_{-0.34}$	$f\sigma_8(0.57)$	0.4680	$0.467^{+0.018}_{-0.017}$
$\Omega_m h^3$	0.09595	$0.0959^{+0.0036}_{-0.0035}$	Age/Gyr	13.798	$13.80^{+0.18}_{-0.18}$	$\sigma_8(0.57)$	0.6011	$0.600^{+0.023}_{-0.024}$
$\sigma_8$	0.8067	$0.806^{+0.030}_{-0.029}$	$z_*$	1089.82	$1089.9^{+2.3}_{-2.2}$	$\chi^2_{\text{lensing}}$	8.62	$9.7 (\nu: 1.1)$
$\sigma_8 \Omega_m^{0.5}$	0.4473	$0.447^{+0.020}_{-0.020}$	$r_*$	144.85	$144.9^{+1.8}_{-1.8}$	$\chi^2_{6\text{DF}}$	0.007	$0.065 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	0.6007	$0.600^{+0.023}_{-0.023}$	$100\theta_*$	1.040989	$1.04099^{+0.00019}_{-0.00019}$	$\chi^2_{\text{MGS}}$	1.47	$1.54 (\nu: 0.2)$
$\sigma_8/h^{0.5}$	0.9796	$0.978^{+0.038}_{-0.036}$	$D_A/\text{Gpc}$	13.915	$13.92^{+0.17}_{-0.18}$	$\chi^2_{\text{DR11CMass}}$	2.41	$3.05 (\nu: 0.4)$
$\langle d^2 \rangle^{1/2}$	2.451	$2.446^{+0.075}_{-0.069}$	$z_{\text{drag}}$	1059.74	$1059.6^{+4.1}_{-4.3}$	$\chi^2_{\text{DR11LOWZ}}$	0.45	$0.64 (\nu: 0.2)$
$z_{\text{re}}$	9.193	$9.22^{+0.49}_{-0.44}$	$r_{\text{drag}}$	147.53	$147.6^{+2.5}_{-2.4}$	$\chi^2_{\text{prior}}$	-0.02	$1.9 (\nu: 1.8)$
$10^9 A_s$	2.113	$2.11^{+0.14}_{-0.14}$	$k_D$	0.14038	$0.1402^{+0.0038}_{-0.0039}$	$\chi^2_{\text{BAO}}$	4.34	$5.3 (\nu: 0.9)$
$10^9 A_s e^{-2\tau}$	1.837	$1.83^{+0.12}_{-0.12}$	$100\theta_D$	0.16083	$0.1610^{+0.0026}_{-0.0026}$			
$D_{40}$	1227	$1222^{+110}_{-100}$	$z_{\text{eq}}$	3365	$3364^{+100}_{-100}$			

Best-fit  $\chi^2_{\text{eff}} = 12.94$ ;  $\bar{\chi}^2_{\text{eff}} = 16.95$ ;  $R - 1 = 0.00592$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMass: 2.41 DR11LOWZ: 0.45 CMB - smica\_g30\_ftl\_full\_pp\_lenonly: 8.62

## 2.150 base\_WLonlyHeymans

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02229	$0.0223^{+0.0018}_{-0.0017}$	$10^9 A_s$	1.17	$1.6^{+2.3}_{-1.3}$	$z_{\text{drag}}$	1063.1	$1061.8^{+6.4}_{-6.5}$
$\Omega_c h^2$	0.170	$0.152^{+0.070}_{-0.066}$	$10^9 A_s e^{-2\tau}$	1.02	$1.4^{+2.0}_{-1.1}$	$r_{\text{drag}}$	135.7	$140^{+20}_{-20}$
$100\theta_{\text{MC}}$	1.128	$1.10^{+0.11}_{-0.12}$	$D_{40}$	644	$932^{+2000}_{-800}$	$k_D$	0.1536	$0.149^{+0.018}_{-0.019}$
$\ln(10^{10} A_s)$	2.46	$< 3.65$	$D_{220}$	2551	$4057^{+7000}_{-4000}$	$100\theta_D$	0.1732	$0.169^{+0.016}_{-0.018}$
$n_s$	0.9598	$0.961^{+0.039}_{-0.038}$	$D_{810}$	1086	$1655^{+3000}_{-2000}$	$z_{\text{eq}}$	4597	$4176^{+2000}_{-2000}$
$H_0$	83.3	$> 52.4$	$D_{1420}$	290	$488^{+900}_{-500}$	$k_{\text{eq}}$	0.01403	$0.0127^{+0.0051}_{-0.0048}$
$\Omega_\Lambda$	0.722	$0.69^{+0.20}_{-0.26}$	$D_{2000}$	83	$145^{+300}_{-200}$	$100\theta_{\text{eq}}$	0.707	$0.75^{+0.20}_{-0.15}$
$\Omega_m$	0.278	$0.31^{+0.26}_{-0.20}$	$n_{s,0.002}$	0.9598	$0.961^{+0.039}_{-0.038}$	$100\theta_{s,\text{eq}}$	0.395	$0.419^{+0.11}_{-0.080}$
$\Omega_m h^2$	0.193	$0.175^{+0.070}_{-0.066}$	$Y_P$	0.24536	$0.24534^{+0.00075}_{-0.00079}$	$r_{\text{drag}}/D_V(0.57)$	0.0799	$0.078^{+0.017}_{-0.019}$
$\Omega_m h^3$	0.161	$0.140^{+0.093}_{-0.084}$	$Y_P^{\text{BBN}}$	0.24669	$0.24666^{+0.00076}_{-0.00080}$	$H(0.57)$	111.7	$106^{+20}_{-30}$
$\sigma_8$	0.788	$0.78^{+0.31}_{-0.28}$	$10^5 D/H$	2.606	$2.62^{+0.35}_{-0.33}$	$D_A(0.57)$	1141	$1239^{+500}_{-300}$
$\sigma_8 \Omega_m^{0.5}$	0.4155	$0.414^{+0.032}_{-0.034}$	Age/Gyr	11.55	$12.4^{+3.3}_{-2.7}$	$F_{\text{AP}}(0.57)$	0.667	$0.673^{+0.060}_{-0.052}$
$\sigma_8 \Omega_m^{0.25}$	0.572	$0.57^{+0.12}_{-0.12}$	$z_*$	1094.1	$1092.6^{+5.9}_{-5.8}$	$f\sigma_8(0.57)$	0.449	$0.44^{+0.11}_{-0.12}$
$\sigma_8/h^{0.5}$	0.863	$0.88^{+0.25}_{-0.19}$	$r_*$	133.3	$138^{+20}_{-10}$	$\sigma_8(0.57)$	0.594	$0.59^{+0.29}_{-0.25}$
$\langle d^2 \rangle^{1/2}$	1.97	$2.12^{+0.92}_{-0.60}$	$100\theta_*$	1.128	$1.10^{+0.11}_{-0.12}$	$\chi_{\text{CFHTLENS}}^2$	95.62	$97.4 (\nu: 1.6)$
$z_{\text{re}}$	10.30	$9.9^{+1.4}_{-1.5}$	$D_A/\text{Gpc}$	11.81	$12.6^{+2.8}_{-2.5}$	$\chi_{\text{prior}}^2$	0.00	$1.9 (\nu: 1.8)$

Best-fit  $\chi_{\text{eff}}^2 = 95.62$ ;  $\bar{\chi}_{\text{eff}}^2 = 99.33$ ;  $R - 1 = 0.00922$

$\chi_{\text{eff}}^2$ : WL - CFHTLENS\_6bin.conservative: 95.62

## 2.151 base\_WLonlyHeymans\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02232	$0.0223^{+0.0018}_{-0.0018}$	$D_{40}$	417	$624^{+500}_{-400}$	$z_{\text{eq}}$	4946	$4347^{+1000}_{-1000}$
$\Omega_c h^2$	0.1846	$0.160^{+0.043}_{-0.051}$	$D_{220}$	1654	$2686^{+3000}_{-2000}$	$k_{\text{eq}}$	0.01509	$0.0133^{+0.0032}_{-0.0038}$
$100\theta_{\text{MC}}$	1.1089	$1.085^{+0.043}_{-0.055}$	$D_{810}$	774	$1219^{+1000}_{-800}$	$100\theta_{\text{eq}}$	0.660	$0.716^{+0.13}_{-0.098}$
$\ln(10^{10} A_s)$	2.060	$< 2.98$	$D_{1420}$	224	$377^{+400}_{-300}$	$100\theta_{\text{s,eq}}$	0.369	$0.399^{+0.068}_{-0.051}$
$n_s$	0.9612	$0.961^{+0.039}_{-0.039}$	$D_{2000}$	66	$110^{+100}_{-80}$	$r_{\text{drag}}/D_V(0.57)$	0.07233	$0.0722^{+0.0011}_{-0.0011}$
$H_0$	72.88	$71.1^{+4.2}_{-4.6}$	$n_{\text{s},0.002}$	0.9612	$0.961^{+0.039}_{-0.039}$	$H(0.57)$	106.2	$101.4^{+8.9}_{-11}$
$\Omega_\Lambda$	0.609	$0.641^{+0.067}_{-0.055}$	$Y_{\text{P}}$	0.24537	$0.24535^{+0.00075}_{-0.00081}$	$D_A(0.57)$	1250	$1298^{+110}_{-94}$
$\Omega_{\text{m}}$	0.391	$0.359^{+0.055}_{-0.067}$	$Y_{\text{P}}^{\text{BBN}}$	0.24670	$0.24668^{+0.00075}_{-0.00082}$	$F_{\text{AP}}(0.57)$	0.6950	$0.688^{+0.013}_{-0.016}$
$\Omega_{\text{m}} h^2$	0.2076	$0.183^{+0.044}_{-0.052}$	$10^5 D/H$	2.600	$2.61^{+0.35}_{-0.33}$	$f\sigma_8(0.57)$	0.3915	$0.408^{+0.042}_{-0.038}$
$\Omega_{\text{m}} h^3$	0.1513	$0.130^{+0.038}_{-0.044}$	Age/Gyr	11.99	$12.6^{+1.5}_{-1.2}$	$\sigma_8(0.57)$	0.471	$0.503^{+0.074}_{-0.060}$
$\sigma_8$	0.651	$0.688^{+0.087}_{-0.073}$	$z_*$	1095.11	$1093.2^{+4.2}_{-4.8}$	$\chi^2_{6\text{DF}}$	0.380	$0.24 (\nu: 0.0)$
$\sigma_8 \Omega_{\text{m}}^{0.5}$	0.4072	$0.411^{+0.029}_{-0.031}$	$r_*$	130.5	$136^{+12}_{-9.3}$	$\chi^2_{\text{MGS}}$	0.38	$0.89 (\nu: 0.2)$
$\sigma_8 \Omega_{\text{m}}^{0.25}$	0.5151	$0.532^{+0.048}_{-0.045}$	$100\theta_*$	1.1090	$1.085^{+0.043}_{-0.055}$	$\chi^2_{\text{DR11CMASS}}$	0.86	$2.1 (\nu: 0.9)$
$\sigma_8/h^{0.5}$	0.763	$0.817^{+0.12}_{-0.096}$	$D_A/\text{Gpc}$	11.77	$12.5^{+1.8}_{-1.3}$	$\chi^2_{\text{DR11LOWZ}}$	1.12	$0.95 (\nu: 0.3)$
$\langle d^2 \rangle^{1/2}$	1.707	$1.90^{+0.46}_{-0.33}$	$z_{\text{drag}}$	1064.1	$1062.4^{+5.0}_{-5.6}$	$\chi^2_{\text{CFHTLENS}}$	95.41	$97.0 (\nu: 1.2)$
$z_{\text{re}}$	10.50	$10.0^{+1.0}_{-1.1}$	$r_{\text{drag}}$	132.9	$138^{+12}_{-9.7}$	$\chi^2_{\text{prior}}$	0.00	$2.0 (\nu: 2.0)$
$10^9 A_s$	0.78	$1.12^{+0.88}_{-0.58}$	$k_{\text{D}}$	0.1570	$0.151^{+0.012}_{-0.014}$	$\chi^2_{\text{BAO}}$	2.74	$4.2 (\nu: 1.3)$
$10^9 A_s e^{-2\tau}$	0.68	$0.98^{+0.76}_{-0.51}$	$100\theta_{\text{D}}$	0.1700	$0.1668^{+0.0067}_{-0.0079}$			

Best-fit  $\chi^2_{\text{eff}} = 98.15$ ;  $\bar{\chi}^2_{\text{eff}} = 103.12$ ;  $R - 1 = 0.01769$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.38 MGS: 0.38 DR11CMASS: 0.86 DR11LOWZ: 1.12 WL - CFHTLENS\_6bin\_conservative: 95.41



## 2.152 base\_WLonlyHeymans\_BAO\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02213	$0.0223^{+0.0018}_{-0.0018}$	$D_{220}$	4759	$4768^{+1000}_{-900}$	$k_{\text{eq}}$	0.010247	$0.01027^{+0.00032}_{-0.00030}$
$\Omega_c h^2$	0.11837	$0.1186^{+0.0037}_{-0.0034}$	$D_{810}$	2106	$2101^{+400}_{-400}$	$100\theta_{\text{eq}}$	0.8206	$0.820^{+0.016}_{-0.016}$
$\ln(10^{10} A_s)$	2.885	$2.88^{+0.19}_{-0.19}$	$D_{1420}$	677	$675^{+100}_{-100}$	$100\theta_{s,\text{eq}}$	0.4534	$0.4528^{+0.0089}_{-0.0090}$
$n_s$	0.9644	$0.963^{+0.039}_{-0.040}$	$D_{2000}$	189.5	$189^{+40}_{-30}$	$r_{\text{drag}}/D_V(0.57)$	0.07179	$0.0718^{+0.0010}_{-0.0010}$
$H_0$	67.69	$67.7^{+1.6}_{-1.7}$	$n_{s,0.002}$	0.9644	$0.963^{+0.039}_{-0.040}$	$H(0.57)$	92.93	$93.0^{+1.3}_{-1.3}$
$\Omega_\Lambda$	0.6920	$0.692^{+0.018}_{-0.020}$	$Y_P$	0.24528	$0.24534^{+0.00079}_{-0.00082}$	$D_A(0.57)$	1387.3	$1386^{+26}_{-25}$
$\Omega_m$	0.3080	$0.308^{+0.020}_{-0.018}$	$Y_P^{\text{BBN}}$	0.24661	$0.24666^{+0.00079}_{-0.00083}$	$F_{\text{AP}}(0.57)$	0.67514	$0.6752^{+0.0049}_{-0.0046}$
$\Omega_m h^2$	0.14114	$0.1415^{+0.0044}_{-0.0041}$	$10^5 D/H$	2.637	$2.62^{+0.37}_{-0.32}$	$f\sigma_8(0.57)$	0.4320	$0.431^{+0.034}_{-0.036}$
$\Omega_m h^3$	0.09554	$0.0959^{+0.0036}_{-0.0036}$	Age/Gyr	13.818	$13.80^{+0.18}_{-0.18}$	$\sigma_8(0.57)$	0.5546	$0.553^{+0.046}_{-0.049}$
$\sigma_8$	0.744	$0.743^{+0.060}_{-0.065}$	$z_*$	1090.08	$1090.0^{+2.4}_{-2.1}$	$\chi_{6\text{DF}}^2$	0.008	$0.07 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	0.4132	$0.412^{+0.033}_{-0.034}$	$r_*$	145.04	$144.9^{+1.8}_{-1.9}$	$\chi_{\text{MGS}}^2$	1.47	$1.50 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	0.5546	$0.553^{+0.042}_{-0.046}$	$100\theta_*$	1.041007	$1.04100^{+0.00019}_{-0.00019}$	$\chi_{\text{DR11CMASS}}^2$	2.40	$3.09 (\nu: 0.5)$
$\sigma_8/h^{0.5}$	0.905	$0.902^{+0.070}_{-0.077}$	$D_A/\text{Gpc}$	13.932	$13.92^{+0.17}_{-0.18}$	$\chi_{\text{DR11LOWZ}}^2$	0.45	$0.69 (\nu: 0.3)$
$\langle d^2 \rangle^{1/2}$	2.245	$2.25^{+0.22}_{-0.23}$	$z_{\text{drag}}$	1059.25	$1059.6^{+4.3}_{-4.3}$	$\chi_{\text{CFHTLENS}}^2$	96.80	$98.0 (\nu: 1.2)$
$z_{\text{re}}$	9.245	$9.22^{+0.50}_{-0.45}$	$r_{\text{drag}}$	147.79	$147.6^{+2.4}_{-2.5}$	$\chi_{\text{prior}}^2$	0.01	$2.1 (\nu: 2.2)$
$10^9 A_s$	1.790	$1.79^{+0.32}_{-0.32}$	$k_D$	0.13995	$0.1402^{+0.0039}_{-0.0039}$	$\chi_{\text{BAO}}^2$	4.33	$5.4 (\nu: 1.1)$
$10^9 A_s e^{-2\tau}$	1.556	$1.55^{+0.28}_{-0.28}$	$100\theta_D$	0.16112	$0.1610^{+0.0027}_{-0.0024}$			
$D_{40}$	1026	$1030^{+200}_{-200}$	$z_{\text{eq}}$	3357	$3366^{+110}_{-99}$			

Best-fit  $\chi_{\text{eff}}^2 = 101.15$ ;  $\bar{\chi}_{\text{eff}}^2 = 105.40$ ;  $R - 1 = 0.01167$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMASS: 2.40 DR11LOWZ: 0.45 WL - CFHTLENS\_6bin\_conservative: 96.81

### 2.153 base\_WLonlyHeymans\_H070p6\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02232	$0.0223^{+0.0018}_{-0.0019}$	$10^9 A_s e^{-2\tau}$	1.92	$1.9^{+1.1}_{-1.0}$	$r_{\text{drag}}$	149.5	$149.2^{+6.1}_{-6.1}$
$\Omega_c h^2$	0.1113	$0.113^{+0.020}_{-0.019}$	$D_{40}$	1295	$1296^{+800}_{-700}$	$k_D$	0.1383	$0.1386^{+0.0072}_{-0.0069}$
$\ln(10^{10} A_s)$	3.10	$3.05^{+0.55}_{-0.56}$	$D_{220}$	6085	$6084^{+4000}_{-4000}$	$100\theta_D$	0.16111	$0.1612^{+0.0029}_{-0.0028}$
$n_s$	0.9638	$0.962^{+0.039}_{-0.040}$	$D_{810}$	2618	$2597^{+2000}_{-1000}$	$z_{\text{eq}}$	3193	$3229^{+500}_{-500}$
$H_0$	70.5	$70.1^{+6.9}_{-6.7}$	$D_{1420}$	836	$827^{+500}_{-400}$	$k_{\text{eq}}$	0.00975	$0.0099^{+0.0015}_{-0.0014}$
$\Omega_\Lambda$	0.730	$0.719^{+0.092}_{-0.10}$	$D_{2000}$	235	$232^{+100}_{-100}$	$100\theta_{\text{eq}}$	0.853	$0.849^{+0.091}_{-0.086}$
$\Omega_m$	0.270	$0.281^{+0.10}_{-0.092}$	$n_{s,0.002}$	0.9638	$0.962^{+0.039}_{-0.040}$	$100\theta_{s,\text{eq}}$	0.4699	$0.468^{+0.048}_{-0.045}$
$\Omega_m h^2$	0.1343	$0.136^{+0.020}_{-0.019}$	$Y_P$	0.24537	$0.24535^{+0.00081}_{-0.00085}$	$r_{\text{drag}}/D_V(0.57)$	0.0741	$0.0739^{+0.0066}_{-0.0060}$
$\Omega_m h^3$	0.0946	$0.0948^{+0.0053}_{-0.0052}$	$Y_P^{\text{BBN}}$	0.24670	$0.24668^{+0.00082}_{-0.00086}$	$H(0.57)$	93.91	$93.9^{+2.7}_{-2.4}$
$\sigma_8$	0.800	$0.79^{+0.16}_{-0.14}$	$10^5 D/H$	2.602	$2.61^{+0.37}_{-0.34}$	$D_A(0.57)$	1353	$1358^{+83}_{-83}$
$\sigma_8 \Omega_m^{0.5}$	0.4163	$0.413^{+0.030}_{-0.034}$	Age/Gyr	13.764	$13.77^{+0.19}_{-0.18}$	$F_{\text{AP}}(0.57)$	0.6653	$0.668^{+0.026}_{-0.025}$
$\sigma_8 \Omega_m^{0.25}$	0.577	$0.570^{+0.068}_{-0.068}$	$z_*$	1089.22	$1089.4^{+2.6}_{-2.5}$	$f\sigma_8(0.57)$	0.454	$0.446^{+0.059}_{-0.062}$
$\sigma_8/h^{0.5}$	0.954	$0.94^{+0.14}_{-0.14}$	$r_*$	146.8	$146.5^{+5.5}_{-5.6}$	$\sigma_8(0.57)$	0.606	$0.60^{+0.14}_{-0.13}$
$\langle d^2 \rangle^{1/2}$	2.43	$2.40^{+0.52}_{-0.50}$	$100\theta_*$	1.041002	$1.04100^{+0.00021}_{-0.00020}$	$\chi_{\text{H070p6}}^2$	0.00	1.1 ( $\nu$ : 1.2)
$z_{\text{re}}$	9.06	$9.09^{+0.56}_{-0.55}$	$D_A/\text{Gpc}$	14.10	$14.07^{+0.53}_{-0.54}$	$\chi_{\text{CFHTLENS}}^2$	97.01	98.1 ( $\nu$ : 1.2)
$10^9 A_s$	2.21	$2.2^{+1.3}_{-1.1}$	$z_{\text{drag}}$	1059.17	$1059.2^{+4.9}_{-4.9}$	$\chi_{\text{prior}}^2$	0.04	2.1 ( $\nu$ : 2.3)

Best-fit  $\chi_{\text{eff}}^2 = 97.05$ ;  $\bar{\chi}_{\text{eff}}^2 = 101.23$ ;  $R - 1 = 0.00445$

$\chi_{\text{eff}}^2$ : Hubble - H070p6: 0.00 WL - CFHTLENS\_6bin\_conservative: 97.00

## 2.154 base\_WLonlyHeymans\_H070p6\_BAO\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02239	$0.0224^{+0.0017}_{-0.0018}$	$D_{220}$	4817	$4820^{+1000}_{-900}$	$k_{\text{eq}}$	0.010273	$0.01026^{+0.00032}_{-0.00030}$
$\Omega_c h^2$	0.11846	$0.1183^{+0.0036}_{-0.0034}$	$D_{810}$	2120	$2118^{+400}_{-400}$	$100\theta_{\text{eq}}$	0.8198	$0.820^{+0.016}_{-0.016}$
$\ln(10^{10} A_s)$	2.892	$2.89^{+0.17}_{-0.18}$	$D_{1420}$	682	$681^{+100}_{-100}$	$100\theta_{\text{s,eq}}$	0.4528	$0.4531^{+0.0088}_{-0.0091}$
$n_s$	0.9625	$0.962^{+0.039}_{-0.039}$	$D_{2000}$	191.2	$191^{+40}_{-30}$	$r_{\text{drag}}/D_V(0.57)$	0.07180	$0.0718^{+0.0010}_{-0.0010}$
$H_0$	67.87	$67.9^{+1.6}_{-1.6}$	$n_{\text{s},0.002}$	0.9625	$0.962^{+0.039}_{-0.039}$	$H(0.57)$	93.11	$93.1^{+1.2}_{-1.3}$
$\Omega_\Lambda$	0.6928	$0.693^{+0.018}_{-0.018}$	$Y_P$	0.24540	$0.24538^{+0.00078}_{-0.00079}$	$D_A(0.57)$	1384.2	$1384^{+25}_{-24}$
$\Omega_m$	0.3072	$0.307^{+0.018}_{-0.018}$	$Y_P^{\text{BBN}}$	0.24673	$0.24671^{+0.00078}_{-0.00079}$	$F_{\text{AP}}(0.57)$	0.67493	$0.6748^{+0.0046}_{-0.0046}$
$\Omega_m h^2$	0.14150	$0.1414^{+0.0044}_{-0.0041}$	$10^5 D/H$	2.588	$2.60^{+0.34}_{-0.33}$	$f\sigma_8(0.57)$	0.4327	$0.432^{+0.033}_{-0.034}$
$\Omega_m h^3$	0.09603	$0.0960^{+0.0033}_{-0.0034}$	Age/Gyr	13.793	$13.79^{+0.17}_{-0.18}$	$\sigma_8(0.57)$	0.5559	$0.555^{+0.046}_{-0.047}$
$\sigma_8$	0.746	$0.744^{+0.059}_{-0.061}$	$z_*$	1089.76	$1089.8^{+2.2}_{-2.1}$	$\chi^2_{\text{H070p6}}$	0.68	$0.71 (\nu: 0.1)$
$\sigma_8 \Omega_m^{0.5}$	0.4134	$0.412^{+0.030}_{-0.032}$	$r_*$	144.82	$144.9^{+1.8}_{-1.8}$	$\chi^2_{6\text{DF}}$	0.007	$0.062 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	0.5553	$0.554^{+0.041}_{-0.043}$	$100\theta_*$	1.040979	$1.04099^{+0.00019}_{-0.00019}$	$\chi^2_{\text{MGS}}$	1.47	$1.61 (\nu: 0.2)$
$\sigma_8/h^{0.5}$	0.905	$0.903^{+0.069}_{-0.072}$	$D_A/\text{Gpc}$	13.912	$13.92^{+0.17}_{-0.17}$	$\chi^2_{\text{DR11CMASS}}$	2.42	$3.07 (\nu: 0.4)$
$\langle d^2 \rangle^{1/2}$	2.256	$2.25^{+0.21}_{-0.21}$	$z_{\text{drag}}$	1059.86	$1059.8^{+4.1}_{-4.2}$	$\chi^2_{\text{DR11LOWZ}}$	0.44	$0.58 (\nu: 0.2)$
$z_{\text{re}}$	9.181	$9.19^{+0.46}_{-0.45}$	$r_{\text{drag}}$	147.48	$147.5^{+2.4}_{-2.3}$	$\chi^2_{\text{CFHTLENS}}$	96.85	$97.9 (\nu: 0.9)$
$10^9 A_s$	1.802	$1.80^{+0.33}_{-0.31}$	$k_D$	0.14047	$0.1404^{+0.0036}_{-0.0039}$	$\chi^2_{\text{prior}}$	-0.01	$2.0 (\nu: 1.9)$
$10^9 A_s e^{-2\tau}$	1.567	$1.57^{+0.28}_{-0.27}$	$100\theta_D$	0.16076	$0.1608^{+0.0025}_{-0.0024}$	$\chi^2_{\text{BAO}}$	4.33	$5.3 (\nu: 1.0)$
$D_{40}$	1038	$1040^{+200}_{-200}$	$z_{\text{eq}}$	3366	$3363^{+110}_{-98}$			

Best-fit  $\chi^2_{\text{eff}} = 101.85$ ;  $\bar{\chi}^2_{\text{eff}} = 105.89$ ;  $R - 1 = 0.00864$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMASS: 2.42 DR11LOWZ: 0.44 Hubble - H070p6: 0.68 WL - CFHTLENS\_6bin\_conservative: 96.85

## 2.155 base\_WMAP

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02257	$0.02267^{+0.00098}_{-0.00096}$	$z_{\text{re}}$	10.55	$10.6^{+2.3}_{-2.2}$	$z_{\text{drag}}$	1060.01	$1060.2^{+2.1}_{-2.2}$
$\Omega_c h^2$	0.1145	$0.1137^{+0.0088}_{-0.0087}$	$10^9 A_s$	2.204	$2.20^{+0.14}_{-0.13}$	$r_{\text{drag}}$	148.34	$148.5^{+2.4}_{-2.3}$
$100\theta_{\text{MC}}$	1.04006	$1.0403^{+0.0044}_{-0.0045}$	$10^9 A_s e^{-2\tau}$	1.852	$1.844^{+0.059}_{-0.060}$	$k_{\text{D}}$	0.13971	$0.1396^{+0.0026}_{-0.0027}$
$\tau$	0.0868	$0.089^{+0.029}_{-0.028}$	$D_{40}$	1221.5	$1219^{+48}_{-47}$	$100\theta_{\text{D}}$	0.16053	$0.1605^{+0.0010}_{-0.00093}$
$\ln(10^{10} A_s)$	3.093	$3.092^{+0.063}_{-0.058}$	$D_{220}$	5751	$5751^{+68}_{-68}$	$z_{\text{eq}}$	3276	$3258^{+210}_{-200}$
$n_s$	0.9727	$0.974^{+0.025}_{-0.025}$	$D_{810}$	2518	$2509^{+62}_{-63}$	$k_{\text{eq}}$	0.009998	$0.00994^{+0.00063}_{-0.00061}$
$A_{\text{tsz}}$	0.00	—	$D_{1420}$	811.0	$808^{+30}_{-31}$	$100\theta_{\text{eq}}$	0.8365	$0.841^{+0.042}_{-0.039}$
$H_0$	69.21	$69.7^{+4.3}_{-4.1}$	$D_{2000}$	229.4	$229^{+12}_{-12}$	$100\theta_{\text{s,eq}}$	0.4613	$0.464^{+0.021}_{-0.020}$
$\Omega_{\Lambda}$	0.712	$0.717^{+0.050}_{-0.051}$	$n_{\text{s},0.002}$	0.9727	$0.974^{+0.025}_{-0.025}$	$r_{\text{drag}}/D_{\text{V}}(0.57)$	0.07290	$0.0733^{+0.0034}_{-0.0031}$
$\Omega_{\text{m}}$	0.288	$0.283^{+0.051}_{-0.050}$	$Y_{\text{P}}$	0.245483	$0.24552^{+0.00042}_{-0.00043}$	$H(0.57)$	93.52	$93.8^{+2.3}_{-2.1}$
$\Omega_{\text{m}} h^2$	0.1377	$0.1370^{+0.0086}_{-0.0084}$	$Y_{\text{P}}^{\text{BBN}}$	0.246809	$0.24685^{+0.00042}_{-0.00043}$	$D_{\text{A}}(0.57)$	1368	$1361^{+56}_{-56}$
$\Omega_{\text{m}} h^3$	0.09532	$0.0954^{+0.0035}_{-0.0035}$	$10^5 \text{D}/\text{H}$	2.553	$2.54^{+0.18}_{-0.17}$	$F_{\text{AP}}(0.57)$	0.6698	$0.669^{+0.013}_{-0.013}$
$\sigma_8$	0.8121	$0.808^{+0.046}_{-0.046}$	$\text{Age}/\text{Gyr}$	13.777	$13.76^{+0.22}_{-0.23}$	$f\sigma_8(0.57)$	0.4657	$0.462^{+0.037}_{-0.038}$
$\sigma_8 \Omega_{\text{m}}^{0.5}$	0.435	$0.430^{+0.058}_{-0.055}$	$z_*$	1089.19	$1089.0^{+1.6}_{-1.6}$	$\sigma_8(0.57)$	0.6102	$0.608^{+0.028}_{-0.027}$
$\sigma_8 \Omega_{\text{m}}^{0.25}$	0.595	$0.589^{+0.054}_{-0.054}$	$r_*$	145.71	$145.9^{+2.3}_{-2.2}$	$\chi^2_{\text{WMAP}}$	7557.9	$7564.0 (\nu: 6.0)$
$\sigma_8/h^{0.5}$	0.976	$0.968^{+0.075}_{-0.075}$	$100\theta_*$	1.04023	$1.0404^{+0.0043}_{-0.0044}$			
$\langle d^2 \rangle^{1/2}$	2.435	$2.42^{+0.15}_{-0.15}$	$D_{\text{A}}/\text{Gpc}$	14.008	$14.02^{+0.23}_{-0.23}$			

Best-fit  $\chi^2_{\text{eff}} = 7557.94$ ;  $\bar{\chi}^2_{\text{eff}} = 7564.00$ ;  $R - 1 = 0.00785$

$\chi^2_{\text{eff}}$ : CMB - WMAP: 7557.94

## 2.156 base\_WMAP\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02245	$0.02247^{+0.00085}_{-0.00083}$	$10^9 A_s$	2.208	$2.21^{+0.14}_{-0.12}$	$k_D$	0.14026	$0.1403^{+0.0023}_{-0.0023}$
$\Omega_c h^2$	0.11725	$0.1172^{+0.0040}_{-0.0040}$	$10^9 A_s e^{-2\tau}$	1.8663	$1.863^{+0.042}_{-0.043}$	$100\theta_D$	0.16052	$0.1605^{+0.0010}_{-0.00098}$
$100\theta_{MC}$	1.03953	$1.0395^{+0.0037}_{-0.0040}$	$D_{40}$	1231.8	$1234^{+36}_{-34}$	$z_{eq}$	3338	$3337^{+100}_{-110}$
$\tau$	0.0842	$0.085^{+0.028}_{-0.025}$	$D_{220}$	5742	$5740^{+66}_{-62}$	$k_{eq}$	0.010189	$0.01019^{+0.00032}_{-0.00032}$
$\ln(10^{10} A_s)$	3.095	$3.095^{+0.062}_{-0.056}$	$D_{810}$	2524	$2519^{+58}_{-58}$	$100\theta_{eq}$	0.8240	$0.824^{+0.017}_{-0.017}$
$n_s$	0.9680	$0.967^{+0.020}_{-0.020}$	$D_{1420}$	812.1	$810^{+30}_{-29}$	$100\theta_{s,eq}$	0.4549	$0.4551^{+0.0090}_{-0.0087}$
$A_{tsz}$	0.02	—	$D_{2000}$	229.8	$229^{+12}_{-11}$	$r_{drag}/D_V(0.57)$	0.07187	$0.0719^{+0.0010}_{-0.00097}$
$H_0$	67.93	$68.0^{+1.4}_{-1.4}$	$n_{s,0.002}$	0.9680	$0.967^{+0.020}_{-0.020}$	$H(0.57)$	92.98	$93.0^{+1.2}_{-1.2}$
$\Omega_\Lambda$	0.6959	$0.696^{+0.017}_{-0.017}$	$Y_P$	0.245430	$0.24543^{+0.00037}_{-0.00038}$	$D_A(0.57)$	1384.5	$1384^{+22}_{-22}$
$\Omega_m$	0.3041	$0.304^{+0.017}_{-0.017}$	$Y_P^{BBN}$	0.246757	$0.24676^{+0.00037}_{-0.00038}$	$F_{AP}(0.57)$	0.67415	$0.6740^{+0.0044}_{-0.0043}$
$\Omega_m h^2$	0.14034	$0.1403^{+0.0044}_{-0.0044}$	$10^5 D/H$	2.576	$2.57^{+0.16}_{-0.15}$	$f\sigma_8(0.57)$	0.4758	$0.475^{+0.022}_{-0.021}$
$\Omega_m h^3$	0.09534	$0.0954^{+0.0035}_{-0.0034}$	Age/Gyr	13.819	$13.82^{+0.16}_{-0.16}$	$\sigma_8(0.57)$	0.6130	$0.613^{+0.025}_{-0.024}$
$\sigma_8$	0.8216	$0.821^{+0.035}_{-0.034}$	$z_*$	1089.57	$1089.56^{+0.99}_{-0.97}$	$\chi^2_{WMAP}$	7558.4	$7563.8 (\nu: 5.3)$
$\sigma_8 \Omega_m^{0.5}$	0.4531	$0.453^{+0.026}_{-0.025}$	$r_*$	145.08	$145.1^{+1.4}_{-1.4}$	$\chi^2_{6DF}$	0.001	$0.054 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	0.6102	$0.610^{+0.030}_{-0.028}$	$100\theta_*$	1.03970	$1.0397^{+0.0036}_{-0.0040}$	$\chi^2_{MGS}$	1.61	$1.74 (\nu: 0.2)$
$\sigma_8/h^{0.5}$	0.9969	$0.996^{+0.043}_{-0.043}$	$D_A/Gpc$	13.954	$13.95^{+0.18}_{-0.18}$	$\chi^2_{DR11CMAS}$	2.48	$3.10 (\nu: 0.4)$
$\langle d^2 \rangle^{1/2}$	2.477	$2.479^{+0.080}_{-0.077}$	$z_{drag}$	1059.93	$1060.0^{+2.0}_{-2.1}$	$\chi^2_{DR11LOWZ}$	0.33	$0.48 (\nu: 0.1)$
$z_{re}$	10.41	$10.5^{+2.3}_{-2.2}$	$r_{drag}$	147.73	$147.7^{+1.7}_{-1.7}$	$\chi^2_{BAO}$	4.42	$5.4 (\nu: 0.9)$

Best-fit  $\chi^2_{eff} = 7562.82$ ;  $\bar{\chi}^2_{eff} = 7569.13$ ;  $R - 1 = 0.01084$

$\chi^2_{eff}$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMAS: 2.48 DR11LOWZ: 0.33 CMB - WMAP: 7558.39

## 2.157 base\_CamSpecDS\_TT\_lowTEB

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02223^{+0.00045}_{-0.00043} (+0.0\sigma)$	$H_0$	$67.3^{+1.9}_{-1.8} (+0.0\sigma)$	$100\theta_*$	$1.04110^{+0.00087}_{-0.00090} (+0.1\sigma)$
$\Omega_c h^2$	$0.1198^{+0.0042}_{-0.0042} (+0.0\sigma)$	$\Omega_\Lambda$	$0.685^{+0.025}_{-0.026} (+0.0\sigma)$	$z_{\text{drag}}$	$1059.58^{+0.88}_{-0.87} (+0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04089^{+0.00089}_{-0.00092} (+0.1\sigma)$	$\Omega_m$	$0.315^{+0.026}_{-0.025} (-0.0\sigma)$	$r_{\text{drag}}$	$147.31^{+0.93}_{-0.93} (-0.0\sigma)$
$\tau$	$0.073^{+0.037}_{-0.037} (-0.3\sigma)$	$\Omega_m h^2$	$0.1426^{+0.0039}_{-0.0039} (+0.0\sigma)$	$k_D$	$0.1405^{+0.0010}_{-0.00099} (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.079^{+0.071}_{-0.072} (-0.3\sigma)$	$\Omega_m h^3$	$0.09601^{+0.00086}_{-0.00086} (+0.1\sigma)$	$100\theta_D$	$0.16094^{+0.00052}_{-0.00051} (-0.1\sigma)$
$n_s$	$0.966^{+0.012}_{-0.012} (+0.1\sigma)$	$\sigma_8$	$0.826^{+0.028}_{-0.028} (-0.3\sigma)$	$z_{\text{eq}}$	$3393^{+94}_{-94} (+0.0\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0050} (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.463^{+0.025}_{-0.025} (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.815^{+0.018}_{-0.017} (-0.0\sigma)$
$A_{100}^{\text{PS}}$	$279^{+40}_{-40} (+0.8\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.619^{+0.024}_{-0.025} (-0.2\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0714^{+0.0015}_{-0.0014} (+0.0\sigma)$
$A_{143}^{\text{PS}}$	$46^{+10}_{-10} (+0.3\sigma)$	$\sigma_8/h^{0.5}$	$1.006^{+0.037}_{-0.037} (-0.2\sigma)$	$H(0.57)$	$92.89^{+0.84}_{-0.78} (+0.0\sigma)$
$A_{217}^{\text{PS}}$	$88^{+20}_{-20} (-0.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.484^{+0.086}_{-0.088} (-0.3\sigma)$	$D_A(0.57)$	$1392^{+25}_{-26} (-0.0\sigma)$
$A_{217}^{\text{CIB}}$	$53^{+10}_{-10} (-1.7\sigma)$	$z_{\text{re}}$	$9.4^{+3.5}_{-3.6} (-0.3\sigma)$	$F_{\text{AP}}(0.57)$	$0.6769^{+0.0065}_{-0.0065} (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.38 (-1.1\sigma)$	$10^9 A_s$	$2.18^{+0.16}_{-0.15} (-0.3\sigma)$	$f\sigma_8(0.57)$	$0.481^{+0.017}_{-0.018} (-0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.55^{+0.21}_{-0.20}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.026}_{-0.027} (-0.1\sigma)$	$\sigma_8(0.57)$	$0.613^{+0.022}_{-0.022} (-0.3\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1233^{+29}_{-28} (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24624^{+0.00019}_{-0.00019} (-4.0\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5709^{+81}_{-81} (-0.2\sigma)$	$f_{2000}^{143}$	$32^{+5}_{-5} (+0.9\sigma)$
$A_{100}^{\text{dust}}$	$0.96^{+0.38}_{-0.38}$	$D_{810}$	$2534^{+27}_{-27} (-0.0\sigma)$	$f_{2000}^{217}$	$108.0^{+3.8}_{-3.8} (+1.0\sigma)$
$A_{143}^{\text{dust}}$	$1.07^{+0.36}_{-0.36}$	$D_{1420}$	$815^{+10}_{-9.9} (+0.1\sigma)$	$f_{2000}^{143 \times 217}$	$35^{+4}_{-4} (+1.2\sigma)$
$A_{217}^{\text{dust}}$	$1.16^{+0.22}_{-0.22}$	$n_{s,0.002}$	$0.966^{+0.012}_{-0.012} (+0.1\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.7 (\nu: 2.0) (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.96^{+0.35}_{-0.35}$	$Y_{\text{P}}$	$0.24491^{+0.00019}_{-0.00018} (-4.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8154.7 (\nu: 16.1)$
$c_{100}$	$0.9984^{+0.0019}_{-0.0019} (+0.7\sigma)$	$\text{Age/Gyr}$	$13.811^{+0.075}_{-0.076} (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$7.4 (\nu: 5.5) (+0.0\sigma)$
$c_{217}$	$0.9992^{+0.0035}_{-0.0034} (+2.3\sigma)$	$z_*$	$1090.06^{+0.83}_{-0.83} (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18651.3 (\nu: 16.0) (+1340.0\sigma)$
$\beta_1^1$	$0.0^{+2.0}_{-1.9}$	$r_*$	$144.60^{+0.95}_{-0.92} (-0.0\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18658.72; \Delta\bar{\chi}_{\text{eff}}^2 = 7376.90; R - 1 = 0.00645$$

## 2.158 base\_plikDS\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022277	$0.02225^{+0.00046}_{-0.00043}$ (+0.1 $\sigma$ )	$\Omega_m$	0.3150	$0.315^{+0.027}_{-0.026}$ (+0.0 $\sigma$ )	$100\theta_*$	1.04104	$1.04104^{+0.00091}_{-0.00089}$ (-0.0 $\sigma$ )
$\Omega_c h^2$	0.11981	$0.1198^{+0.0043}_{-0.0043}$ (+0.0 $\sigma$ )	$\Omega_m h^2$	0.14274	$0.1427^{+0.0040}_{-0.0040}$ (+0.1 $\sigma$ )	$D_A/\text{Gpc}$	13.885	$13.887^{+0.090}_{-0.089}$ (-0.1 $\sigma$ )
$100\theta_{\text{MC}}$	1.04084	$1.04085^{+0.00092}_{-0.00091}$ (-0.0 $\sigma$ )	$\Omega_m h^3$	0.09609	$0.09604^{+0.00092}_{-0.00089}$ (+0.2 $\sigma$ )	$z_{\text{drag}}$	1059.70	$1059.65^{+0.93}_{-0.89}$ (+0.2 $\sigma$ )
$\tau$	0.0746	$0.075^{+0.038}_{-0.037}$ (-0.2 $\sigma$ )	$\sigma_8$	0.8272	$0.827^{+0.028}_{-0.028}$ (-0.2 $\sigma$ )	$r_{\text{drag}}$	147.24	$147.27^{+0.96}_{-0.96}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.084	$3.084^{+0.072}_{-0.071}$ (-0.2 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4642	$0.464^{+0.026}_{-0.025}$ (-0.1 $\sigma$ )	$k_D$	0.14064	$0.1406^{+0.0010}_{-0.0010}$ (+0.2 $\sigma$ )
$n_s$	0.9657	$0.965^{+0.012}_{-0.012}$ (-0.1 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6197	$0.620^{+0.025}_{-0.026}$ (-0.1 $\sigma$ )	$100\theta_D$	0.16088	$0.16092^{+0.00052}_{-0.00052}$ (-0.2 $\sigma$ )
$y_{\text{cal}}$	1.00029	$1.0004^{+0.0047}_{-0.0050}$ (+0.0 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0082	$1.008^{+0.037}_{-0.038}$ (-0.1 $\sigma$ )	$z_{\text{eq}}$	3396	$3395^{+96}_{-96}$ (+0.1 $\sigma$ )
$A_{217}^{\text{CIB}}$	70.5	$67^{+10}_{-10}$ (+0.6 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.491	$2.493^{+0.088}_{-0.089}$ (-0.1 $\sigma$ )	$k_{\text{eq}}$	0.010364	$0.01036^{+0.00029}_{-0.00029}$ (+0.1 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.05	—	$z_{\text{re}}$	9.67	$9.6^{+3.5}_{-3.5}$ (-0.2 $\sigma$ )	$100\theta_{\text{eq}}$	0.8142	$0.814^{+0.019}_{-0.018}$ (-0.0 $\sigma$ )
$A_{143}^{\text{tSZ}}$	6.74	$4.7^{+3.7}_{-3.6}$ (-0.2 $\sigma$ )	$10^9 A_s$	2.184	$2.19^{+0.16}_{-0.15}$ (-0.2 $\sigma$ )	$100\theta_{\text{s,eq}}$	0.4499	$0.4500^{+0.0095}_{-0.0092}$ (-0.1 $\sigma$ )
$A_{100}^{\text{PS}}$	278	$283^{+50}_{-50}$ (+0.9 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.8810	$1.881^{+0.027}_{-0.027}$ (+0.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07138	$0.0714^{+0.0015}_{-0.0014}$ (-0.0 $\sigma$ )
$A_{143}^{\text{PS}}$	44.6	$49^{+10}_{-10}$ (+0.6 $\sigma$ )	$D_{40}$	1235.2	$1238^{+29}_{-29}$ (+0.0 $\sigma$ )	$H(0.57)$	92.90	$92.89^{+0.85}_{-0.77}$ (+0.0 $\sigma$ )
$A_{143 \times 217}^{\text{PS}}$	35.6	$41^{+20}_{-20}$ (+0.1 $\sigma$ )	$D_{220}$	5721	$5722^{+80}_{-82}$ (+0.1 $\sigma$ )	$D_A(0.57)$	1391.4	$1392^{+25}_{-26}$ (-0.0 $\sigma$ )
$A_{217}^{\text{PS}}$	94.0	$93^{+20}_{-20}$ (-0.4 $\sigma$ )	$D_{810}$	2535.3	$2535^{+26}_{-27}$ (+0.1 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6769	$0.6770^{+0.0067}_{-0.0066}$ (+0.0 $\sigma$ )
$A^{\text{kSZ}}$	0.0	—	$D_{1420}$	815.3	$814.9^{+9.7}_{-10}$ (+0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4818	$0.482^{+0.018}_{-0.018}$ (-0.1 $\sigma$ )
$A_{100}^{\text{dustTT}}$	7.25	$7.3^{+3.7}_{-3.6}$ (-0.0 $\sigma$ )	$D_{2000}$	230.60	$230.4^{+3.6}_{-3.7}$ (+0.1 $\sigma$ )	$\sigma_8(0.57)$	0.6145	$0.614^{+0.022}_{-0.021}$ (-0.2 $\sigma$ )
$A_{143}^{\text{dustTT}}$	9.09	$9.1^{+3.6}_{-3.6}$ (+0.1 $\sigma$ )	$n_{\text{s},0.002}$	0.9657	$0.965^{+0.012}_{-0.012}$ (-0.1 $\sigma$ )	$f_{2000}^{143}$	32.7	$33^{+5}_{-5}$ (+1.1 $\sigma$ )
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.3^{+8.2}_{-8.1}$ (+0.1 $\sigma$ )	$Y_{\text{P}}$	0.245352	$0.24534^{+0.00020}_{-0.00020}$ (+0.1 $\sigma$ )	$f_{2000}^{143 \times 217}$	32.83	$33^{+4}_{-4}$ (+0.4 $\sigma$ )
$A_{217}^{\text{dustTT}}$	80.7	$81^{+10}_{-10}$ (-0.2 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246678	$0.24667^{+0.00020}_{-0.00020}$ (+0.1 $\sigma$ )	$f_{2000}^{217}$	113.61	$113.9^{+3.7}_{-3.7}$ (+3.9 $\sigma$ )
$c_{100}$	0.99787	$0.9979^{+0.0015}_{-0.0015}$ (+0.0 $\sigma$ )	$10^5 D/H$	2.609	$2.614^{+0.084}_{-0.086}$ (-0.1 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10496.15	$10497.2 (\nu: 2.3)$ (-0.1 $\sigma$ )
$c_{217}$	0.99629	$0.9963^{+0.0028}_{-0.0028}$ (+0.3 $\sigma$ )	Age/Gyr	13.808	$13.810^{+0.072}_{-0.076}$ (-0.1 $\sigma$ )	$\chi_{\text{plik}}^2$	747.9	$761.4 (\nu: 15.3)$ (-2.8 $\sigma$ )
$H_0$	67.32	$67.3^{+1.9}_{-1.9}$ (-0.0 $\sigma$ )	$z_*$	1090.02	$1090.06^{+0.82}_{-0.83}$ (-0.1 $\sigma$ )	$\chi_{\text{prior}}^2$	2.0	$7.2 (\nu: 6.0)$ (-0.0 $\sigma$ )
$\Omega_\Lambda$	0.6850	$0.685^{+0.026}_{-0.027}$ (-0.0 $\sigma$ )	$r_*$	144.55	$144.57^{+0.97}_{-0.96}$ (-0.1 $\sigma$ )	$\chi_{\text{CMB}}^2$	11244.1	$11258.6 (\nu: 15.0)$ (-2.9 $\sigma$ )

Best-fit  $\chi_{\text{eff}}^2 = 11246.11$ ;  $\Delta\chi_{\text{eff}}^2 = -15.81$ ;  $\bar{\chi}_{\text{eff}}^2 = 11265.88$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = -15.93$ ;  $R - 1 = 0.00679$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.15 ( $\Delta$  -0.32) plik\_dx11dr2\_DS.v18\_TT: 747.91

## 2.159 base\_plikHM\_TT\_WMAPTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022226	$0.02222^{+0.00044}_{-0.00041}$	$\Omega_m$	0.3162	$0.316^{+0.026}_{-0.024}$	$100\theta_*$	1.04105	$1.04105^{+0.00089}_{-0.00090}$
$\Omega_c h^2$	0.11999	$0.1199^{+0.0041}_{-0.0040}$	$\Omega_m h^2$	0.14286	$0.1428^{+0.0039}_{-0.0038}$	$D_A/\text{Gpc}$	13.885	$13.887^{+0.086}_{-0.087}$
$100\theta_{\text{MC}}$	1.04084	$1.04085^{+0.00091}_{-0.00092}$	$\Omega_m h^3$	0.09602	$0.09599^{+0.00090}_{-0.00085}$	$z_{\text{drag}}$	1059.59	$1059.57^{+0.90}_{-0.84}$
$\tau$	0.0731	$0.074^{+0.024}_{-0.023}$	$\sigma_8$	0.8268	$0.827^{+0.021}_{-0.020}$	$r_{\text{drag}}$	147.26	$147.29^{+0.95}_{-0.94}$
$\ln(10^{10} A_s)$	3.0810	$3.082^{+0.047}_{-0.045}$	$\sigma_8 \Omega_m^{0.5}$	0.4650	$0.465^{+0.026}_{-0.025}$	$k_D$	0.14058	$0.1405^{+0.0010}_{-0.0010}$
$n_s$	0.9655	$0.965^{+0.012}_{-0.012}$	$\sigma_8 \Omega_m^{0.25}$	0.6200	$0.620^{+0.023}_{-0.023}$	$100\theta_D$	0.16095	$0.16097^{+0.00051}_{-0.00050}$
$y_{\text{cal}}$	1.00031	$1.0004^{+0.0050}_{-0.0049}$	$\sigma_8/h^{0.5}$	1.0085	$1.009^{+0.033}_{-0.032}$	$z_{\text{eq}}$	3398	$3396^{+94}_{-92}$
$A_{217}^{\text{CIB}}$	66.2	$64^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.490	$2.493^{+0.078}_{-0.076}$	$k_{\text{eq}}$	0.010372	$0.01037^{+0.00029}_{-0.00028}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.13	—	$z_{\text{re}}$	9.55	$9.6^{+2.1}_{-2.0}$	$100\theta_{\text{eq}}$	0.8135	$0.814^{+0.018}_{-0.017}$
$A_{143}^{\text{tSZ}}$	7.02	$5.1^{+3.7}_{-3.8}$	$10^9 A_s$	2.178	$2.18^{+0.10}_{-0.099}$	$100\theta_{s,\text{eq}}$	0.4496	$0.4498^{+0.0090}_{-0.0089}$
$A_{100}^{\text{PS}}$	253	$259^{+60}_{-50}$	$10^9 A_s e^{-2\tau}$	1.8816	$1.881^{+0.027}_{-0.026}$	$r_{\text{drag}}/D_V(0.57)$	0.07132	$0.0714^{+0.0014}_{-0.0013}$
$A_{143}^{\text{PS}}$	41.1	$44^{+20}_{-20}$	$D_{40}$	1234.6	$1237^{+31}_{-29}$	$H(0.57)$	92.84	$92.85^{+0.79}_{-0.77}$
$A_{143 \times 217}^{\text{PS}}$	36.4	$39^{+20}_{-20}$	$D_{220}$	5715	$5718^{+83}_{-79}$	$D_A(0.57)$	1392.8	$1393^{+24}_{-24}$
$A_{217}^{\text{PS}}$	98.9	$98^{+20}_{-20}$	$D_{810}$	2535.4	$2535^{+27}_{-27}$	$F_{\text{AP}}(0.57)$	0.6772	$0.6772^{+0.0064}_{-0.0062}$
$A^{\text{kSZ}}$	0.0	—	$D_{1420}$	815.1	$815^{+10}_{-9.8}$	$f\sigma_8(0.57)$	0.4819	$0.482^{+0.016}_{-0.015}$
$A_{100}^{\text{dustTT}}$	7.46	$7.4^{+3.6}_{-3.7}$	$D_{2000}$	230.46	$230.2^{+3.5}_{-3.5}$	$\sigma_8(0.57)$	0.6140	$0.614^{+0.015}_{-0.013}$
$A_{143}^{\text{dustTT}}$	9.06	$9.0^{+3.6}_{-3.6}$	$n_{s,0.002}$	0.9655	$0.965^{+0.012}_{-0.012}$	$f_{2000}^{143}$	29.6	$30^{+6}_{-5}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.2^{+8.2}_{-8.1}$	$Y_{\text{P}}$	0.245329	$0.24532^{+0.00019}_{-0.00019}$	$f_{2000}^{143 \times 217}$	32.29	$33^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	82.3	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	0.246655	$0.24665^{+0.00020}_{-0.00019}$	$f_{2000}^{217}$	105.84	$106.2^{+3.9}_{-3.8}$
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	$10^5 \text{D}/\text{H}$	2.619	$2.621^{+0.080}_{-0.082}$	$\chi_{\text{WMAPTEB}}^2$	19734.15	$19735.4 (\nu: 2.4)$
$c_{217}$	0.99597	$0.9959^{+0.0029}_{-0.0029}$	$\text{Age}/\text{Gyr}$	13.814	$13.814^{+0.069}_{-0.073}$	$\chi_{\text{plik}}^2$	764.1	$777.4 (\nu: 15.2)$
$H_0$	67.21	$67.2^{+1.8}_{-1.8}$	$z_*$	1090.10	$1090.11^{+0.77}_{-0.79}$	$\chi_{\text{prior}}^2$	1.9	$7.3 (\nu: 6.3)$
$\Omega_\Lambda$	0.6838	$0.684^{+0.024}_{-0.026}$	$r_*$	144.54	$144.57^{+0.94}_{-0.93}$	$\chi_{\text{CMB}}^2$	20498.2	$20512.8 (\nu: 15.1)$

Best-fit  $\chi_{\text{eff}}^2 = 20500.15$ ;  $\bar{\chi}_{\text{eff}}^2 = 20520.13$ ;  $R - 1 = 0.01203$

$\chi_{\text{eff}}^2$ : CMB - bflike\_WMAP353ggf\_LFI312\_nw8: 19734.15 plik\_dx11dr2\_HM\_v18\_TT: 764.08



## 2.160 base\_plikHM\_TT\_WMAPTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02228^{+0.00043}_{-0.00042}$	$\Omega_m h^2$	$0.1412^{+0.0031}_{-0.0031}$	$z_{\text{drag}}$	$1059.60^{+0.90}_{-0.87}$
$\Omega_c h^2$	$0.1183^{+0.0032}_{-0.0032}$	$\Omega_m h^3$	$0.09593^{+0.00091}_{-0.00084}$	$r_{\text{drag}}$	$147.65^{+0.78}_{-0.76}$
$100\theta_{\text{MC}}$	$1.04108^{+0.00081}_{-0.00082}$	$\sigma_8$	$0.817^{+0.015}_{-0.014}$	$k_{\text{D}}$	$0.14021^{+0.00088}_{-0.00091}$
$\tau$	$0.070^{+0.022}_{-0.022}$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.017}_{-0.016}$	$100\theta_{\text{D}}$	$0.16096^{+0.00052}_{-0.00052}$
$\ln(10^{10} A_s)$	$3.070^{+0.040}_{-0.039}$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.015}_{-0.014}$	$z_{\text{eq}}$	$3359^{+74}_{-74}$
$n_s$	$0.969^{+0.011}_{-0.0097}$	$\sigma_8/h^{0.5}$	$0.991^{+0.020}_{-0.020}$	$k_{\text{eq}}$	$0.01025^{+0.00023}_{-0.00023}$
$y_{\text{cal}}$	$1.0001^{+0.0051}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	$2.452^{+0.047}_{-0.044}$	$100\theta_{\text{eq}}$	$0.821^{+0.014}_{-0.014}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$z_{\text{re}}$	$9.2^{+2.0}_{-1.9}$	$100\theta_{\text{s,eq}}$	$0.4535^{+0.0072}_{-0.0071}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s$	$2.154^{+0.087}_{-0.085}$	$r_{\text{drag}}/D_{\text{V}}(0.57)$	$0.0719^{+0.0011}_{-0.0011}$
$A_{143}^{\text{tSZ}}$	$5.1^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.024}_{-0.024}$	$H(0.57)$	$93.13^{+0.70}_{-0.64}$
$A_{100}^{\text{PS}}$	$259^{+60}_{-60}$	$D_{40}$	$1225^{+25}_{-25}$	$D_{\text{A}}(0.57)$	$1383^{+19}_{-20}$
$A_{143}^{\text{PS}}$	$44^{+20}_{-20}$	$D_{220}$	$5717^{+86}_{-86}$	$F_{\text{AP}}(0.57)$	$0.6746^{+0.0050}_{-0.0049}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$D_{810}$	$2532^{+27}_{-27}$	$f\sigma_8(0.57)$	$0.4737^{+0.0098}_{-0.0096}$
$A_{217}^{\text{PS}}$	$96^{+20}_{-20}$	$D_{1420}$	$815^{+10}_{-9.7}$	$\sigma_8(0.57)$	$0.609^{+0.012}_{-0.012}$
$A^{\text{kSZ}}$	—	$D_{2000}$	$230.2^{+3.7}_{-3.4}$	$f_{2000}^{143}$	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	$7.4^{+3.6}_{-3.6}$	$n_{\text{s},0.002}$	$0.969^{+0.011}_{-0.0097}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	$9.1^{+3.5}_{-3.6}$	$Y_{\text{P}}$	$0.24535^{+0.00019}_{-0.00019}$	$f_{2000}^{217}$	$106.1^{+3.9}_{-3.8}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.3^{+8.1}_{-8.2}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24668^{+0.00019}_{-0.00019}$	$\chi_{\text{lensing}}^2$	$9.98 (\nu: 1.2)$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-20}$	$10^5 \text{D}/\text{H}$	$2.608^{+0.080}_{-0.080}$	$\chi_{\text{WMAPTEB}}^2$	$19734.0 (\nu: 1.1)$
$c_{100}$	$0.9979^{+0.0016}_{-0.0016}$	$\text{Age}/\text{Gyr}$	$13.794^{+0.062}_{-0.065}$	$\chi_{\text{plik}}^2$	$779.4 (\nu: 46.0)$
$c_{217}$	$0.9960^{+0.0028}_{-0.0029}$	$z_*$	$1089.88^{+0.69}_{-0.72}$	$\chi_{\text{prior}}^2$	$7.4 (\nu: 6.4)$
$H_0$	$68.0^{+1.5}_{-1.4}$	$r_*$	$144.95^{+0.75}_{-0.75}$	$\chi_{\text{CMB}}^2$	$20523.3 (\nu: 46.5)$
$\Omega_{\Lambda}$	$0.694^{+0.019}_{-0.020}$	$100\theta_*$	$1.04127^{+0.00080}_{-0.00081}$		
$\Omega_{\text{m}}$	$0.306^{+0.020}_{-0.019}$	$D_{\text{A}}/\text{Gpc}$	$13.921^{+0.070}_{-0.071}$		

$$\bar{\chi}_{\text{eff}}^2 = 20530.75; R - 1 = 0.02755$$

## 2.161 base\_plikHM\_TT\_WMAPTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02226^{+0.00039}_{-0.00038}$	$\Omega_m h^3$	$0.09599^{+0.00091}_{-0.00085}$	$k_D$	$0.14040^{+0.00088}_{-0.00085}$
$\Omega_c h^2$	$0.1191^{+0.0025}_{-0.0024}$	$\sigma_8$	$0.825^{+0.020}_{-0.019}$	$100\theta_D$	$0.16095^{+0.00051}_{-0.00049}$
$100\theta_{MC}$	$1.04097^{+0.00079}_{-0.00081}$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.017}_{-0.017}$	$z_{eq}$	$3378^{+57}_{-56}$
$\tau$	$0.076^{+0.023}_{-0.021}$	$\sigma_8 \Omega_m^{0.25}$	$0.616^{+0.018}_{-0.017}$	$k_{eq}$	$0.01031^{+0.00018}_{-0.00017}$
$\ln(10^{10} A_s)$	$3.084^{+0.045}_{-0.043}$	$\sigma_8/h^{0.5}$	$1.004^{+0.027}_{-0.026}$	$100\theta_{eq}$	$0.817^{+0.010}_{-0.011}$
$n_s$	$0.9669^{+0.0086}_{-0.0087}$	$\langle d^2 \rangle^{1/2}$	$2.482^{+0.062}_{-0.061}$	$100\theta_{s,eq}$	$0.4516^{+0.0054}_{-0.0054}$
$y_{cal}$	$1.0004^{+0.0050}_{-0.0050}$	$z_{re}$	$9.7^{+2.0}_{-2.0}$	$r_{drag}/D_V(0.57)$	$0.07163^{+0.00082}_{-0.00082}$
$A_{217}^{CIB}$	$64^{+10}_{-10}$	$10^9 A_s$	$2.18^{+0.10}_{-0.091}$	$H(0.57)$	$92.99^{+0.54}_{-0.51}$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.878^{+0.024}_{-0.023}$	$D_A(0.57)$	$1388^{+15}_{-15}$
$A_{143}^{tSZ}$	$5.2^{+3.8}_{-3.8}$	$D_{40}$	$1233^{+27}_{-26}$	$F_{AP}(0.57)$	$0.6758^{+0.0038}_{-0.0037}$
$A_{100}^{PS}$	$258^{+50}_{-60}$	$D_{220}$	$5721^{+81}_{-78}$	$f\sigma_8(0.57)$	$0.480^{+0.013}_{-0.012}$
$A_{143}^{PS}$	$44^{+20}_{-20}$	$D_{810}$	$2534^{+27}_{-26}$	$\sigma_8(0.57)$	$0.614^{+0.015}_{-0.013}$
$A_{143 \times 217}^{PS}$	$39^{+20}_{-20}$	$D_{1420}$	$815^{+10}_{-9.6}$	$f_{2000}^{143}$	$30^{+6}_{-5}$
$A_{217}^{PS}$	$97^{+20}_{-20}$	$D_{2000}$	$230.4^{+3.5}_{-3.4}$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$
$A^{kSZ}$	$< 8.21$	$n_{s,0.002}$	$0.9669^{+0.0086}_{-0.0087}$	$f_{2000}^{217}$	$106.0^{+4.0}_{-3.6}$
$A_{100}^{dustTT}$	$7.4^{+3.6}_{-3.6}$	$Y_P$	$0.24534^{+0.00017}_{-0.00017}$	$\chi_{WMAPTEB}^2$	$19735.1 (\nu: 2.4)$
$A_{143}^{dustTT}$	$9.0^{+3.6}_{-3.5}$	$Y_P^{BBN}$	$0.24667^{+0.00017}_{-0.00017}$	$\chi_{plik}^2$	$777 (\nu: 67.1)$
$A_{143 \times 217}^{dustTT}$	$17.2^{+8.3}_{-8.1}$	$10^5 D/H$	$2.612^{+0.073}_{-0.073}$	$\chi_{6DF}^2$	$0.064 (\nu: 0.0)$
$A_{217}^{dustTT}$	$82^{+10}_{-20}$	$Age/Gyr$	$13.803^{+0.053}_{-0.055}$	$\chi_{MGS}^2$	$1.31 (\nu: 0.1)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0016}$	$z_*$	$1089.98^{+0.57}_{-0.58}$	$\chi_{DR11CMass}^2$	$2.90 (\nu: 0.2)$
$c_{217}$	$0.9959^{+0.0029}_{-0.0029}$	$r_*$	$144.75^{+0.61}_{-0.62}$	$\chi_{DR11LOWZ}^2$	$0.78 (\nu: 0.2)$
$H_0$	$67.6^{+1.1}_{-1.1}$	$100\theta_*$	$1.04116^{+0.00078}_{-0.00080}$	$\chi_{prior}^2$	$7.3 (\nu: 6.4)$
$\Omega_\Lambda$	$0.689^{+0.014}_{-0.015}$	$D_A/Gpc$	$13.903^{+0.060}_{-0.061}$	$\chi_{CMB}^2$	$20510 (\nu: 67.6)$
$\Omega_m$	$0.311^{+0.015}_{-0.014}$	$z_{drag}$	$1059.62^{+0.89}_{-0.86}$	$\chi_{BAO}^2$	$5.1 (\nu: 0.5)$
$\Omega_m h^2$	$0.1420^{+0.0024}_{-0.0023}$	$r_{drag}$	$147.46^{+0.66}_{-0.68}$		

$$\bar{\chi}_{eff}^2 = 20524.89; R - 1 = 0.01550$$

## 2.162 base\_plikHM\_TT\_WMAPTEB\_post\_BAO\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02227^{+0.00040}_{-0.00039}$	$\Omega_m h^3$	$0.09593^{+0.00090}_{-0.00085}$	$k_D$	$0.14023^{+0.00084}_{-0.00084}$
$\Omega_c h^2$	$0.1185^{+0.0022}_{-0.0022}$	$\sigma_8$	$0.817^{+0.014}_{-0.013}$	$100\theta_D$	$0.16098^{+0.00052}_{-0.00050}$
$100\theta_{MC}$	$1.04106^{+0.00073}_{-0.00078}$	$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.013}_{-0.012}$	$z_{eq}$	$3363^{+51}_{-51}$
$\tau$	$0.069^{+0.019}_{-0.018}$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.013}_{-0.012}$	$k_{eq}$	$0.01026^{+0.00016}_{-0.00016}$
$\ln(10^{10} A_s)$	$3.068^{+0.036}_{-0.033}$	$\sigma_8/h^{0.5}$	$0.992^{+0.019}_{-0.019}$	$100\theta_{eq}$	$0.8202^{+0.0096}_{-0.0095}$
$n_s$	$0.9681^{+0.0083}_{-0.0081}$	$\langle d^2 \rangle^{1/2}$	$2.453^{+0.044}_{-0.042}$	$100\theta_{s,eq}$	$0.4531^{+0.0050}_{-0.0049}$
$y_{cal}$	$1.0001^{+0.0050}_{-0.0048}$	$z_{re}$	$9.1^{+1.7}_{-1.7}$	$r_{drag}/D_V(0.57)$	$0.07185^{+0.00076}_{-0.00075}$
$A_{217}^{CIB}$	$64^{+10}_{-10}$	$10^9 A_s$	$2.150^{+0.078}_{-0.071}$	$H(0.57)$	$93.08^{+0.51}_{-0.51}$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.873^{+0.022}_{-0.021}$	$D_A(0.57)$	$1385^{+14}_{-14}$
$A_{143}^{tSZ}$	$5.1^{+3.8}_{-3.8}$	$D_{40}$	$1226^{+24}_{-24}$	$F_{AP}(0.57)$	$0.6749^{+0.0034}_{-0.0034}$
$A_{100}^{PS}$	$260^{+60}_{-50}$	$D_{220}$	$5715^{+83}_{-79}$	$f\sigma_8(0.57)$	$0.4739^{+0.0091}_{-0.0089}$
$A_{143}^{PS}$	$44^{+20}_{-20}$	$D_{810}$	$2531^{+27}_{-27}$	$\sigma_8(0.57)$	$0.609^{+0.011}_{-0.010}$
$A_{143 \times 217}^{PS}$	$39^{+20}_{-20}$	$D_{1420}$	$814^{+10}_{-9.6}$	$f_{2000}^{143}$	$30^{+5}_{-5}$
$A_{217}^{PS}$	$96^{+20}_{-20}$	$D_{2000}$	$230.1^{+3.6}_{-3.3}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A^{kSZ}$	—	$n_{s,0.002}$	$0.9681^{+0.0083}_{-0.0081}$	$f_{2000}^{217}$	$106.2^{+3.9}_{-3.8}$
$A_{100}^{dustTT}$	$7.4^{+3.6}_{-3.7}$	$Y_P$	$0.24534^{+0.00018}_{-0.00018}$	$\chi^2_{lensing}$	$9.9 (\nu: 1.0)$
$A_{143}^{dustTT}$	$9.1^{+3.5}_{-3.6}$	$Y_P^{BBN}$	$0.24667^{+0.00018}_{-0.00018}$	$\chi^2_{WMAPTEB}$	$19733.9 (\nu: 0.8)$
$A_{143 \times 217}^{dustTT}$	$17.3^{+8.3}_{-8.2}$	$10^5 D/H$	$2.611^{+0.076}_{-0.074}$	$\chi^2_{plik}$	$779 (\nu: 58.6)$
$A_{217}^{dustTT}$	$82^{+10}_{-20}$	$Age/Gyr$	$13.797^{+0.052}_{-0.054}$	$\chi^2_{6DF}$	$0.036 (\nu: 0.0)$
$c_{100}$	$0.9979^{+0.0016}_{-0.0016}$	$z_*$	$1089.92^{+0.56}_{-0.58}$	$\chi^2_{MGS}$	$1.58 (\nu: 0.1)$
$c_{217}$	$0.9960^{+0.0029}_{-0.0029}$	$r_*$	$144.91^{+0.60}_{-0.58}$	$\chi^2_{DR11CMass}$	$2.76 (\nu: 0.1)$
$H_0$	$67.9^{+1.0}_{-1.0}$	$100\theta_*$	$1.04125^{+0.00072}_{-0.00076}$	$\chi^2_{DR11LOWZ}$	$0.50 (\nu: 0.1)$
$\Omega_\Lambda$	$0.693^{+0.013}_{-0.014}$	$D_A/Gpc$	$13.917^{+0.057}_{-0.057}$	$\chi^2_{prior}$	$7.5 (\nu: 6.4)$
$\Omega_m$	$0.307^{+0.014}_{-0.013}$	$z_{drag}$	$1059.58^{+0.89}_{-0.85}$	$\chi^2_{CMB}$	$20520 (\nu: 59.4)$
$\Omega_m h^2$	$0.1414^{+0.0021}_{-0.0021}$	$r_{drag}$	$147.62^{+0.66}_{-0.64}$	$\chi^2_{BAO}$	$4.87 (\nu: 0.3)$

$$\bar{\chi}^2_{eff} = 20535.09; R - 1 = 0.02637$$

### 3 Alens

#### 3.1 base\_Alens\_plikHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02271	$0.02262^{+0.00057}_{-0.00056}$	$\Omega_m$	0.2920	$0.295^{+0.031}_{-0.028}$	$D_A/\text{Gpc}$	13.936	$13.933^{+0.093}_{-0.094}$
$\Omega_c h^2$	0.11625	$0.1166^{+0.0050}_{-0.0048}$	$\Omega_m h^2$	0.13960	$0.1399^{+0.0046}_{-0.0044}$	$z_{\text{drag}}$	1060.47	$1060.3^{+1.1}_{-1.1}$
$100\theta_{\text{MC}}$	1.04141	$1.0414^{+0.0010}_{-0.0010}$	$\Omega_m h^3$	0.09652	$0.09641^{+0.00098}_{-0.00097}$	$r_{\text{drag}}$	147.71	$147.71^{+0.99}_{-1.0}$
$\tau$	0.0636	$0.059^{+0.041}_{-0.040}$	$\sigma_8$	0.8047	$0.802^{+0.036}_{-0.035}$	$k_D$	0.14046	$0.1404^{+0.0010}_{-0.0010}$
$A_L$	1.239	$1.22^{+0.21}_{-0.20}$	$\sigma_8 \Omega_m^{0.5}$	0.4349	$0.436^{+0.036}_{-0.034}$	$100\theta_D$	0.16050	$0.16060^{+0.00059}_{-0.00058}$
$\ln(10^{10} A_s)$	3.054	$3.046^{+0.081}_{-0.081}$	$\sigma_8 \Omega_m^{0.25}$	0.5916	$0.591^{+0.036}_{-0.035}$	$z_{\text{eq}}$	3321	$3328^{+110}_{-110}$
$n_s$	0.9767	$0.974^{+0.014}_{-0.014}$	$\sigma_8/h^{0.5}$	0.968	$0.967^{+0.053}_{-0.052}$	$k_{\text{eq}}$	0.010135	$0.01016^{+0.00034}_{-0.00032}$
$y_{\text{cal}}$	0.99997	$1.0001^{+0.0049}_{-0.0050}$	$\langle d^2 \rangle^{1/2}$	2.664	$2.64^{+0.15}_{-0.15}$	$100\theta_{\text{eq}}$	0.8295	$0.828^{+0.022}_{-0.022}$
$A_{217}^{\text{CIB}}$	58.1	$61^{+10}_{-10}$	$z_{\text{re}}$	8.45	$8.0^{+4.0}_{-4.4}$	$100\theta_{s,\text{eq}}$	0.4576	$0.457^{+0.011}_{-0.011}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.88	—	$10^9 A_s$	2.120	$2.10^{+0.17}_{-0.18}$	$r_{\text{drag}}/D_V(0.57)$	0.07268	$0.0726^{+0.0018}_{-0.0018}$
$A_{143}^{\text{tSZ}}$	6.72	$5.6^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8671	$1.868^{+0.029}_{-0.029}$	$H(0.57)$	93.75	$93.6^{+1.1}_{-1.1}$
$A_{100}^{\text{PS}}$	236	$247^{+60}_{-60}$	$D_{40}$	1208.1	$1213^{+36}_{-34}$	$D_A(0.57)$	1366.8	$1370^{+32}_{-31}$
$A_{143}^{\text{PS}}$	45.0	$38^{+20}_{-20}$	$D_{220}$	5741	$5740^{+83}_{-82}$	$F_{\text{AP}}(0.57)$	0.6710	$0.6717^{+0.0080}_{-0.0075}$
$A_{143 \times 217}^{\text{PS}}$	52.9	$38^{+20}_{-20}$	$D_{810}$	2528.6	$2527^{+28}_{-28}$	$f\sigma_8(0.57)$	0.4627	$0.462^{+0.026}_{-0.025}$
$A_{217}^{\text{PS}}$	107.2	$98^{+20}_{-20}$	$D_{1420}$	816.0	$814.3^{+9.8}_{-9.8}$	$\sigma_8(0.57)$	0.6034	$0.601^{+0.025}_{-0.024}$
$A^{\text{kSZ}}$	0.00	$< 7.14$	$D_{2000}$	233.36	$232.4^{+4.0}_{-4.0}$	$f_{2000}^{143}$	25.0	$27^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.38	$7.4^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9767	$0.974^{+0.014}_{-0.014}$	$f_{2000}^{143 \times 217}$	28.79	$30^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	8.98	$8.9^{+3.6}_{-3.6}$	$Y_P$	0.245542	$0.24550^{+0.00025}_{-0.00025}$	$f_{2000}^{217}$	102.38	$103.5^{+4.5}_{-4.4}$
$A_{143 \times 217}^{\text{dustTT}}$	18.1	$16.6^{+8.2}_{-8.2}$	$Y_P^{\text{BBN}}$	0.246869	$0.24683^{+0.00025}_{-0.00025}$	$\chi^2_{\text{lowTEB}}$	10493.41	10494.9 ( $\nu: 1.5$ )
$A_{217}^{\text{dustTT}}$	83.0	$82^{+10}_{-10}$	$10^5 D/H$	2.528	$2.55^{+0.10}_{-0.10}$	$\chi^2_{\text{plik}}$	760.7	775.1 ( $\nu: 15.6$ )
$c_{100}$	0.99801	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.732	$13.743^{+0.097}_{-0.099}$	$\chi^2_{\text{prior}}$	1.4	7.2 ( $\nu: 6.1$ )
$c_{217}$	0.99534	$0.9956^{+0.0029}_{-0.0029}$	$z_*$	1089.18	$1089.3^{+1.1}_{-1.0}$	$\chi^2_{\text{CMB}}$	11254.1	11270.0 ( $\nu: 16.3$ )
$H_0$	69.14	$68.9^{+2.4}_{-2.4}$	$r_*$	145.15	$145.1^{+1.0}_{-1.0}$			
$\Omega_\Lambda$	0.7080	$0.705^{+0.028}_{-0.031}$	$100\theta_*$	1.04156	$1.0415^{+0.0010}_{-0.0010}$			

Best-fit  $\chi^2_{\text{eff}} = 11255.51$ ;  $\bar{\chi}^2_{\text{eff}} = 11277.18$ ;  $R - 1 = 0.00926$

$\chi^2_{\text{eff}}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10493.41 plik\_dx11dr2\_HM\_v18\_TT: 760.74

### 3.2 base\_Alens\_plikHM\_TT\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022545	$0.02249^{+0.00044}_{-0.00043}$	$\Omega_m h^2$	0.14116	$0.1413^{+0.0024}_{-0.0025}$	$r_{\text{drag}}$	147.44	$147.44^{+0.69}_{-0.68}$
$\Omega_c h^2$	0.11797	$0.1182^{+0.0026}_{-0.0026}$	$\Omega_m h^3$	0.09639	$0.09634^{+0.00094}_{-0.00095}$	$k_D$	0.14063	$0.14059^{+0.00088}_{-0.00088}$
$100\theta_{\text{MC}}$	1.04114	$1.04115^{+0.00083}_{-0.00086}$	$\sigma_8$	0.8089	$0.807^{+0.034}_{-0.034}$	$100\theta_D$	0.16062	$0.16069^{+0.00053}_{-0.00054}$
$\tau$	0.0605	$0.058^{+0.039}_{-0.042}$	$\sigma_8 \Omega_m^{0.5}$	0.4450	$0.445^{+0.024}_{-0.023}$	$z_{\text{eq}}$	3358	$3362^{+58}_{-59}$
$A_L$	1.202	$1.19^{+0.18}_{-0.16}$	$\sigma_8 \Omega_m^{0.25}$	0.6000	$0.599^{+0.028}_{-0.028}$	$k_{\text{eq}}$	0.010248	$0.01026^{+0.00018}_{-0.00018}$
$\ln(10^{10} A_s)$	3.052	$3.046^{+0.080}_{-0.078}$	$\sigma_8/h^{0.5}$	0.9788	$0.978^{+0.044}_{-0.044}$	$100\theta_{\text{eq}}$	0.8220	$0.821^{+0.011}_{-0.011}$
$n_s$	0.9720	$0.9699^{+0.0091}_{-0.0087}$	$\langle d^2 \rangle^{1/2}$	2.651	$2.63^{+0.14}_{-0.14}$	$100\theta_{s,\text{eq}}$	0.4538	$0.4533^{+0.0058}_{-0.0055}$
$y_{\text{cal}}$	0.99999	$1.0001^{+0.0050}_{-0.0049}$	$z_{\text{re}}$	8.23	$7.8^{+4.0}_{-4.4}$	$r_{\text{drag}}/D_V(0.57)$	0.07205	$0.07198^{+0.00090}_{-0.00088}$
$A_{217}^{\text{CIB}}$	59.7	$62^{+10}_{-10}$	$10^9 A_s$	2.115	$2.10^{+0.17}_{-0.17}$	$H(0.57)$	93.36	$93.30^{+0.61}_{-0.58}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.74	—	$10^9 A_s e^{-2\tau}$	1.8739	$1.874^{+0.023}_{-0.023}$	$D_A(0.57)$	1378.1	$1380^{+16}_{-16}$
$A_{143}^{\text{tSZ}}$	6.80	$5.6^{+3.8}_{-3.7}$	$D_{40}$	1216.8	$1222^{+29}_{-27}$	$F_{\text{AP}}(0.57)$	0.67378	$0.6742^{+0.0040}_{-0.0040}$
$A_{100}^{\text{PS}}$	240	$249^{+50}_{-50}$	$D_{220}$	5731	$5732^{+84}_{-78}$	$f\sigma_8(0.57)$	0.4680	$0.467^{+0.021}_{-0.021}$
$A_{143}^{\text{PS}}$	44.7	$40^{+20}_{-20}$	$D_{810}$	2530.1	$2529^{+28}_{-27}$	$\sigma_8(0.57)$	0.6039	$0.602^{+0.025}_{-0.025}$
$A_{143 \times 217}^{\text{PS}}$	50.6	$38^{+20}_{-20}$	$D_{1420}$	815.0	$813.7^{+9.9}_{-9.8}$	$f_{2000}^{143}$	26.0	$27^{+6}_{-6}$
$A_{217}^{\text{PS}}$	106.0	$98^{+20}_{-20}$	$D_{2000}$	232.54	$231.8^{+3.7}_{-3.6}$	$f_{2000}^{143 \times 217}$	29.67	$30^{+4}_{-4}$
$A^{\text{kSZ}}$	0.01	$< 7.37$	$n_{s,0.002}$	0.9720	$0.9699^{+0.0091}_{-0.0087}$	$f_{2000}^{217}$	103.16	$104.2^{+4.2}_{-4.1}$
$A_{100}^{\text{dustTT}}$	7.61	$7.4^{+3.8}_{-3.6}$	$Y_{\text{P}}$	0.245470	$0.24544^{+0.00020}_{-0.00020}$	$\chi_{\text{lowTEB}}^2$	10494.08	$10495.5 (\nu: 1.2)$
$A_{143}^{\text{dustTT}}$	9.07	$8.9^{+3.6}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.246797	$0.24677^{+0.00020}_{-0.00020}$	$\chi_{\text{plik}}^2$	760.6	$774.2 (\nu: 14.4)$
$A_{143 \times 217}^{\text{dustTT}}$	18.0	$16.8^{+8.4}_{-8.2}$	$10^5 D/H$	2.559	$2.570^{+0.080}_{-0.081}$	$\chi_{6\text{DF}}^2$	0.002	$0.046 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	82.6	$82^{+10}_{-10}$	Age/Gyr	13.765	$13.771^{+0.062}_{-0.063}$	$\chi_{\text{MGS}}^2$	1.82	$1.78 (\nu: 0.2)$
$c_{100}$	0.99804	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1089.52	$1089.62^{+0.65}_{-0.66}$	$\chi_{\text{DR11CMass}}^2$	2.58	$2.99 (\nu: 0.3)$
$c_{217}$	0.99539	$0.9956^{+0.0029}_{-0.0029}$	$r_*$	144.82	$144.81^{+0.64}_{-0.62}$	$\chi_{\text{DR11LOWZ}}^2$	0.19	$0.41 (\nu: 0.1)$
$H_0$	68.29	$68.2^{+1.2}_{-1.2}$	$100\theta_*$	1.04130	$1.04132^{+0.00081}_{-0.00085}$	$\chi_{\text{prior}}^2$	1.4	$7.2 (\nu: 6.1)$
$\Omega_\Lambda$	0.6973	$0.696^{+0.015}_{-0.016}$	$D_A/\text{Gpc}$	13.908	$13.906^{+0.062}_{-0.060}$	$\chi_{\text{CMB}}^2$	11254.7	$11269.7 (\nu: 15.4)$
$\Omega_m$	0.3027	$0.304^{+0.016}_{-0.015}$	$z_{\text{drag}}$	1060.20	$1060.08^{+0.97}_{-0.94}$	$\chi_{\text{BAO}}^2$	4.60	$5.2 (\nu: 0.8)$

Best-fit  $\chi_{\text{eff}}^2 = 11260.70$ ;  $\bar{\chi}_{\text{eff}}^2 = 11282.16$ ;  $R - 1 = 0.01751$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.82 DR11CMass: 2.58 DR11LOWZ: 0.19 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.08 plik\_dx11dr2\_HM\_v18\_TT: 760.62

### 3.3 base\_Alens\_plikHM\_TT\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02271	$0.02263^{+0.00054}_{-0.00053}$	$\Omega_m$	0.2918	$0.295^{+0.028}_{-0.026}$	$D_A/\text{Gpc}$	13.936	$13.933^{+0.088}_{-0.087}$
$\Omega_c h^2$	0.11621	$0.1166^{+0.0045}_{-0.0044}$	$\Omega_m h^2$	0.13957	$0.1399^{+0.0042}_{-0.0041}$	$z_{\text{drag}}$	1060.43	$1060.3^{+1.1}_{-1.0}$
$100\theta_{\text{MC}}$	1.04144	$1.04137^{+0.00099}_{-0.0010}$	$\Omega_m h^3$	0.09652	$0.09641^{+0.00097}_{-0.00096}$	$r_{\text{drag}}$	147.73	$147.71^{+0.93}_{-0.93}$
$\tau$	0.0618	$0.059^{+0.041}_{-0.040}$	$\sigma_8$	0.8032	$0.802^{+0.036}_{-0.035}$	$k_D$	0.14045	$0.14040^{+0.00099}_{-0.00099}$
$A_L$	1.246	$1.22^{+0.21}_{-0.18}$	$\sigma_8 \Omega_m^{0.5}$	0.4339	$0.436^{+0.034}_{-0.032}$	$100\theta_D$	0.16050	$0.16060^{+0.00058}_{-0.00058}$
$\ln(10^{10} A_s)$	3.050	$3.046^{+0.080}_{-0.080}$	$\sigma_8 \Omega_m^{0.25}$	0.5903	$0.591^{+0.034}_{-0.033}$	$z_{\text{eq}}$	3320	$3327^{+100}_{-98}$
$n_s$	0.9769	$0.974^{+0.013}_{-0.013}$	$\sigma_8/h^{0.5}$	0.966	$0.966^{+0.051}_{-0.050}$	$k_{\text{eq}}$	0.010132	$0.01016^{+0.00031}_{-0.00030}$
$y_{\text{cal}}$	0.99990	$1.0001^{+0.0049}_{-0.0050}$	$\langle d^2 \rangle^{1/2}$	2.666	$2.64^{+0.15}_{-0.15}$	$100\theta_{\text{eq}}$	0.8297	$0.828^{+0.020}_{-0.020}$
$A_{217}^{\text{CIB}}$	57.8	$61^{+10}_{-10}$	$z_{\text{re}}$	8.28	$8.0^{+4.0}_{-4.4}$	$100\theta_{s,\text{eq}}$	0.4577	$0.457^{+0.010}_{-0.010}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.97	—	$10^9 A_s$	2.112	$2.10^{+0.17}_{-0.18}$	$r_{\text{drag}}/D_V(0.57)$	0.07270	$0.0726^{+0.0017}_{-0.0016}$
$A_{143}^{\text{tSZ}}$	6.59	$5.7^{+3.7}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8667	$1.867^{+0.028}_{-0.027}$	$H(0.57)$	93.76	$93.6^{+1.0}_{-0.98}$
$A_{100}^{\text{PS}}$	236	$247^{+60}_{-50}$	$D_{40}$	1206.9	$1213^{+34}_{-33}$	$D_A(0.57)$	1366.5	$1370^{+29}_{-29}$
$A_{143}^{\text{PS}}$	46.3	$38^{+20}_{-20}$	$D_{220}$	5739	$5740^{+83}_{-82}$	$F_{\text{AP}}(0.57)$	0.6710	$0.6717^{+0.0072}_{-0.0069}$
$A_{143 \times 217}^{\text{PS}}$	55.3	$38^{+20}_{-20}$	$D_{810}$	2528.5	$2527^{+27}_{-28}$	$f\sigma_8(0.57)$	0.4618	$0.462^{+0.024}_{-0.024}$
$A_{217}^{\text{PS}}$	108.0	$98^{+20}_{-20}$	$D_{1420}$	816.0	$814.3^{+9.9}_{-9.7}$	$\sigma_8(0.57)$	0.6023	$0.601^{+0.025}_{-0.024}$
$A^{\text{kSZ}}$	0.00	$< 7.13$	$D_{2000}$	233.38	$232.4^{+3.9}_{-3.9}$	$f_{2000}^{143}$	24.9	$27^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.33	$7.4^{+3.8}_{-3.7}$	$n_{s,0.002}$	0.9769	$0.974^{+0.013}_{-0.013}$	$f_{2000}^{143 \times 217}$	28.80	$30^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	8.96	$8.9^{+3.7}_{-3.6}$	$Y_P$	0.245541	$0.24550^{+0.00023}_{-0.00024}$	$f_{2000}^{217}$	102.33	$103.5^{+4.4}_{-4.3}$
$A_{143 \times 217}^{\text{dustTT}}$	18.1	$16.6^{+8.4}_{-8.3}$	$Y_P^{\text{BBN}}$	0.246868	$0.24683^{+0.00023}_{-0.00024}$	$\chi_{\text{lowTEB}}^2$	10493.34	10494.8 ( $\nu: 1.4$ )
$A_{217}^{\text{dustTT}}$	82.8	$82^{+10}_{-10}$	$10^5 D/H$	2.529	$2.545^{+0.098}_{-0.096}$	$\chi_{\text{plik}}^2$	760.9	775.0 ( $\nu: 15.1$ )
$c_{100}$	0.99804	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.731	$13.743^{+0.090}_{-0.092}$	$\chi_{\text{JLA}}^2$	706.498	706.66 ( $\nu: 0.0$ )
$c_{217}$	0.99537	$0.9956^{+0.0029}_{-0.0029}$	$z_*$	1089.18	$1089.31^{+0.97}_{-0.95}$	$\chi_{\text{prior}}^2$	1.3	7.2 ( $\nu: 6.1$ )
$H_0$	69.16	$68.9^{+2.2}_{-2.2}$	$r_*$	145.16	$145.12^{+0.96}_{-0.96}$	$\chi_{\text{CMB}}^2$	11254.2	11269.8 ( $\nu: 15.7$ )
$\Omega_\Lambda$	0.7082	$0.705^{+0.026}_{-0.028}$	$100\theta_*$	1.04159	$1.04154^{+0.00097}_{-0.00097}$			

Best-fit  $\chi_{\text{eff}}^2 = 11961.99$ ;  $\bar{\chi}_{\text{eff}}^2 = 11983.68$ ;  $R - 1 = 0.01216$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10493.34 plik\_dx11dr2\_HM\_v18\_TT: 760.90 SN - JLA December\_2013: 706.50

### 3.4 base\_Alens\_plikHM\_TT\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02275	$0.02266^{+0.00055}_{-0.00054}$	$\Omega_m$	0.2896	$0.293^{+0.029}_{-0.026}$	$D_A/\text{Gpc}$	13.943	$13.939^{+0.088}_{-0.090}$
$\Omega_c h^2$	0.11583	$0.1162^{+0.0047}_{-0.0045}$	$\Omega_m h^2$	0.13922	$0.1396^{+0.0043}_{-0.0042}$	$z_{\text{drag}}$	1060.51	$1060.3^{+1.1}_{-1.0}$
$100\theta_{\text{MC}}$	1.04146	$1.0414^{+0.0010}_{-0.0010}$	$\Omega_m h^3$	0.09653	$0.09643^{+0.00097}_{-0.00096}$	$r_{\text{drag}}$	147.79	$147.77^{+0.94}_{-0.96}$
$\tau$	0.0619	$0.060^{+0.041}_{-0.040}$	$\sigma_8$	0.8017	$0.801^{+0.036}_{-0.035}$	$k_D$	0.14041	$0.1404^{+0.0010}_{-0.00099}$
$A_L$	1.252	$1.23^{+0.21}_{-0.20}$	$\sigma_8 \Omega_m^{0.5}$	0.4314	$0.433^{+0.034}_{-0.032}$	$100\theta_D$	0.16047	$0.16057^{+0.00058}_{-0.00057}$
$\ln(10^{10} A_s)$	3.050	$3.046^{+0.081}_{-0.081}$	$\sigma_8 \Omega_m^{0.25}$	0.5881	$0.589^{+0.035}_{-0.034}$	$z_{\text{eq}}$	3311	$3319^{+100}_{-99}$
$n_s$	0.9778	$0.975^{+0.014}_{-0.013}$	$\sigma_8/h^{0.5}$	0.963	$0.964^{+0.052}_{-0.050}$	$k_{\text{eq}}$	0.010107	$0.01013^{+0.00032}_{-0.00030}$
$y_{\text{cal}}$	1.00001	$1.0001^{+0.0049}_{-0.0050}$	$\langle d^2 \rangle^{1/2}$	2.664	$2.65^{+0.15}_{-0.15}$	$100\theta_{\text{eq}}$	0.8314	$0.830^{+0.021}_{-0.021}$
$A_{217}^{\text{CIB}}$	57.8	$61^{+10}_{-10}$	$z_{\text{re}}$	8.27	$8.0^{+4.0}_{-4.4}$	$100\theta_{s,\text{eq}}$	0.4585	$0.458^{+0.010}_{-0.010}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.95	—	$10^9 A_s$	2.111	$2.10^{+0.17}_{-0.18}$	$r_{\text{drag}}/D_V(0.57)$	0.07284	$0.0727^{+0.0017}_{-0.0017}$
$A_{143}^{\text{tSZ}}$	6.72	$5.7^{+3.7}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8653	$1.866^{+0.028}_{-0.027}$	$H(0.57)$	93.84	$93.7^{+1.1}_{-1.0}$
$A_{100}^{\text{PS}}$	235	$246^{+60}_{-50}$	$D_{40}$	1205.3	$1211^{+34}_{-33}$	$D_A(0.57)$	1364.2	$1367^{+30}_{-29}$
$A_{143}^{\text{PS}}$	45.4	$38^{+20}_{-20}$	$D_{220}$	5743	$5742^{+82}_{-82}$	$F_{\text{AP}}(0.57)$	0.6704	$0.6711^{+0.0074}_{-0.0070}$
$A_{143 \times 217}^{\text{PS}}$	54.6	$38^{+20}_{-20}$	$D_{810}$	2528.3	$2526^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4603	$0.461^{+0.025}_{-0.024}$
$A_{217}^{\text{PS}}$	107.7	$98^{+20}_{-20}$	$D_{1420}$	816.2	$814.5^{+9.9}_{-9.8}$	$\sigma_8(0.57)$	0.6018	$0.601^{+0.025}_{-0.025}$
$A^{\text{kSZ}}$	0.00	$< 7.07$	$D_{2000}$	233.53	$232.6^{+3.9}_{-3.9}$	$f_{2000}^{143}$	24.7	$26^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.34	$7.4^{+3.8}_{-3.7}$	$n_{s,0.002}$	0.9778	$0.975^{+0.014}_{-0.013}$	$f_{2000}^{143 \times 217}$	28.64	$29^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	9.01	$8.9^{+3.7}_{-3.6}$	$Y_P$	0.245558	$0.24552^{+0.00023}_{-0.00024}$	$f_{2000}^{217}$	102.23	$103.4^{+4.5}_{-4.4}$
$A_{143 \times 217}^{\text{dustTT}}$	18.1	$16.6^{+8.4}_{-8.3}$	$Y_P^{\text{BBN}}$	0.246885	$0.24685^{+0.00024}_{-0.00024}$	$\chi_{\text{lowTEB}}^2$	10493.22	$10494.7 (\nu: 1.4)$
$A_{217}^{\text{dustTT}}$	82.9	$82^{+10}_{-10}$	$10^5 D/H$	2.522	$2.54^{+0.10}_{-0.097}$	$\chi_{\text{plik}}^2$	761.0	$775.2 (\nu: 15.5)$
$c_{100}$	0.99802	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.725	$13.736^{+0.092}_{-0.093}$	$\chi_{\text{H070p6}}^2$	0.15	$0.32 (\nu: 0.1)$
$c_{217}$	0.99532	$0.9955^{+0.0029}_{-0.0029}$	$z_*$	1089.09	$1089.24^{+0.99}_{-0.97}$	$\chi_{\text{prior}}^2$	1.3	$7.2 (\nu: 6.0)$
$H_0$	69.34	$69.1^{+2.2}_{-2.2}$	$r_*$	145.23	$145.19^{+0.98}_{-0.99}$	$\chi_{\text{CMB}}^2$	11254.2	$11269.9 (\nu: 15.9)$
$\Omega_\Lambda$	0.7104	$0.707^{+0.026}_{-0.029}$	$100\theta_*$	1.04161	$1.04159^{+0.00098}_{-0.00098}$			

Best-fit  $\chi_{\text{eff}}^2 = 11255.65$ ;  $\bar{\chi}_{\text{eff}}^2 = 11277.40$ ;  $R - 1 = 0.01240$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.22 plik\_dx11dr2\_HM\_v18\_TT: 760.95 Hubble - H070p6: 0.15

### 3.5 base\_Alens\_plikHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02263^{+0.00058}_{-0.00057}$	$\Omega_m$	$0.294^{+0.031}_{-0.030}$	$D_A/\text{Gpc}$	$13.935^{+0.091}_{-0.095}$
$\Omega_c h^2$	$0.1166^{+0.0050}_{-0.0048}$	$\Omega_m h^2$	$0.1398^{+0.0047}_{-0.0044}$	$z_{\text{drag}}$	$1060.3^{+1.1}_{-1.1}$
$100\theta_{\text{MC}}$	$1.0414^{+0.0010}_{-0.0011}$	$\Omega_m h^3$	$0.09640^{+0.00098}_{-0.00097}$	$r_{\text{drag}}$	$147.73^{+0.97}_{-1.0}$
$\tau$	$0.068^{+0.031}_{-0.027}$	$\sigma_8$	$0.809^{+0.031}_{-0.029}$	$k_D$	$0.1404^{+0.0010}_{-0.0010}$
$A_L$	$1.20^{+0.19}_{-0.18}$	$\sigma_8 \Omega_m^{0.5}$	$0.439^{+0.035}_{-0.032}$	$100\theta_D$	$0.16060^{+0.00060}_{-0.00059}$
$\ln(10^{10} A_s)$	$3.063^{+0.063}_{-0.055}$	$\sigma_8 \Omega_m^{0.25}$	$0.596^{+0.034}_{-0.031}$	$z_{\text{eq}}$	$3326^{+110}_{-100}$
$n_s$	$0.974^{+0.014}_{-0.014}$	$\sigma_8/h^{0.5}$	$0.974^{+0.050}_{-0.044}$	$k_{\text{eq}}$	$0.01015^{+0.00034}_{-0.00032}$
$y_{\text{cal}}$	$1.0001^{+0.0049}_{-0.0050}$	$\langle d^2 \rangle^{1/2}$	$2.64^{+0.15}_{-0.15}$	$100\theta_{\text{eq}}$	$0.828^{+0.022}_{-0.022}$
$A_{217}^{\text{CIB}}$	$61^{+10}_{-10}$	$z_{\text{re}}$	$< 11.4$	$100\theta_{\text{s,eq}}$	$0.457^{+0.011}_{-0.011}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s$	$2.14^{+0.14}_{-0.12}$	$r_{\text{drag}}/D_V(0.57)$	$0.0726^{+0.0018}_{-0.0018}$
$A_{143}^{\text{tSZ}}$	$5.7^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	$1.867^{+0.029}_{-0.028}$	$H(0.57)$	$93.7^{+1.1}_{-1.1}$
$A_{100}^{\text{PS}}$	$247^{+60}_{-50}$	$D_{40}$	$1215^{+35}_{-34}$	$D_A(0.57)$	$1369^{+32}_{-31}$
$A_{143}^{\text{PS}}$	$38^{+20}_{-20}$	$D_{220}$	$5739^{+83}_{-82}$	$F_{\text{AP}}(0.57)$	$0.6716^{+0.0081}_{-0.0074}$
$A_{143 \times 217}^{\text{PS}}$	$38^{+20}_{-20}$	$D_{810}$	$2527^{+27}_{-28}$	$f\sigma_8(0.57)$	$0.466^{+0.024}_{-0.022}$
$A_{217}^{\text{PS}}$	$98^{+20}_{-20}$	$D_{1420}$	$814^{+10}_{-10}$	$\sigma_8(0.57)$	$0.606^{+0.020}_{-0.018}$
$A^{\text{kSZ}}$	$< 7.13$	$D_{2000}$	$232.4^{+4.0}_{-4.1}$	$f_{2000}^{143}$	$27^{+6}_{-7}$
$A_{100}^{\text{dustTT}}$	$7.4^{+3.7}_{-3.7}$	$n_{\text{s},0.002}$	$0.974^{+0.014}_{-0.014}$	$f_{2000}^{143 \times 217}$	$30^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	$8.9^{+3.7}_{-3.6}$	$Y_{\text{P}}$	$0.24550^{+0.00025}_{-0.00026}$	$f_{2000}^{217}$	$103.5^{+4.5}_{-4.4}$
$A_{143 \times 217}^{\text{dustTT}}$	$16.7^{+8.3}_{-8.3}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24683^{+0.00025}_{-0.00026}$	$\chi^2_{\text{lowTEB}}$	$10494.6 (\nu: 1.5)$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	$2.54^{+0.11}_{-0.10}$	$\chi^2_{\text{plik}}$	$775.1 (\nu: 15.5)$
$c_{100}$	$0.9979^{+0.0016}_{-0.0015}$	$\text{Age}/\text{Gyr}$	$13.742^{+0.098}_{-0.099}$	$\chi^2_{\text{prior}}$	$7.2 (\nu: 6.1)$
$c_{217}$	$0.9955^{+0.0029}_{-0.0029}$	$z_*$	$1089.3^{+1.1}_{-1.0}$	$\chi^2_{\text{CMB}}$	$11269.7 (\nu: 16.1)$
$H_0$	$69.0^{+2.4}_{-2.4}$	$r_*$	$145.1^{+1.0}_{-1.0}$		
$\Omega_\Lambda$	$0.706^{+0.030}_{-0.031}$	$100\theta_*$	$1.0415^{+0.0010}_{-0.0010}$		

$$\bar{\chi}^2_{\text{eff}} = 11276.95; R - 1 = 0.01160$$



### 3.6 base\_Alens\_plikHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022432	$0.02240^{+0.00034}_{-0.00033}$	$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.16}_{-0.17}$	Age/Gyr	13.784	$13.787^{+0.057}_{-0.057}$
$\Omega_c h^2$	0.11835	$0.1185^{+0.0031}_{-0.0031}$	$A_{143}^{\text{dustTE}}$	0.153	$0.15^{+0.11}_{-0.10}$	$z_*$	1089.70	$1089.75^{+0.64}_{-0.63}$
$100\theta_{\text{MC}}$	1.04092	$1.04093^{+0.00064}_{-0.00065}$	$A_{143 \times 217}^{\text{dustTE}}$	0.334	$0.33^{+0.16}_{-0.16}$	$r_*$	144.81	$144.80^{+0.65}_{-0.66}$
$\tau$	0.0581	$0.057^{+0.038}_{-0.042}$	$A_{217}^{\text{dustTE}}$	1.65	$1.65^{+0.50}_{-0.50}$	$100\theta_*$	1.04110	$1.04111^{+0.00063}_{-0.00064}$
$A_L$	1.157	$1.15^{+0.16}_{-0.15}$	$c_{100}$	0.99825	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.909	$13.908^{+0.060}_{-0.061}$
$\ln(10^{10} A_s)$	3.048	$3.046^{+0.080}_{-0.078}$	$c_{217}$	0.99562	$0.9957^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.97	$1059.90^{+0.66}_{-0.63}$
$n_s$	0.9692	$0.968^{+0.010}_{-0.010}$	$H_0$	67.99	$67.9^{+1.4}_{-1.4}$	$r_{\text{drag}}$	147.46	$147.46^{+0.63}_{-0.64}$
$y_{\text{cal}}$	0.99988	$1.0001^{+0.0049}_{-0.0049}$	$\Omega_\Lambda$	0.6941	$0.693^{+0.019}_{-0.019}$	$k_D$	0.14052	$0.14050^{+0.00065}_{-0.00064}$
$A_{217}^{\text{CIB}}$	61.5	$62^{+10}_{-10}$	$\Omega_m$	0.3059	$0.307^{+0.019}_{-0.019}$	$100\theta_D$	0.160726	$0.16077^{+0.00038}_{-0.00037}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.63	—	$\Omega_m h^2$	0.14142	$0.1415^{+0.0029}_{-0.0029}$	$z_{\text{eq}}$	3364	$3367^{+69}_{-69}$
$A_{143}^{\text{tSZ}}$	6.87	$5.6^{+3.7}_{-3.7}$	$\Omega_m h^3$	0.09615	$0.09612^{+0.00059}_{-0.00059}$	$k_{\text{eq}}$	0.010268	$0.01028^{+0.00021}_{-0.00021}$
$A_{100}^{\text{PS}}$	247	$254^{+50}_{-50}$	$\sigma_8$	0.8081	$0.808^{+0.034}_{-0.032}$	$100\theta_{\text{eq}}$	0.8203	$0.820^{+0.014}_{-0.013}$
$A_{143}^{\text{PS}}$	45.1	$41^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4470	$0.447^{+0.027}_{-0.025}$	$100\theta_{s,\text{eq}}$	0.4530	$0.4528^{+0.0069}_{-0.0068}$
$A_{143 \times 217}^{\text{PS}}$	49.1	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6010	$0.601^{+0.030}_{-0.028}$	$r_{\text{drag}}/D_V(0.57)$	0.07187	$0.0718^{+0.0011}_{-0.0011}$
$A_{217}^{\text{PS}}$	104.8	$99^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9800	$0.980^{+0.046}_{-0.043}$	$H(0.57)$	93.19	$93.15^{+0.65}_{-0.61}$
$A^{\text{kSZ}}$	0.00	$< 7.14$	$\langle d^2 \rangle^{1/2}$	2.608	$2.60^{+0.11}_{-0.12}$	$D_A(0.57)$	1382.4	$1383^{+19}_{-19}$
$A_{100}^{\text{dustTT}}$	7.29	$7.4^{+3.6}_{-3.6}$	$z_{\text{re}}$	8.02	$7.8^{+4.0}_{-4.4}$	$F_{\text{AP}}(0.57)$	0.67461	$0.6749^{+0.0049}_{-0.0048}$
$A_{143}^{\text{dustTT}}$	8.88	$8.8^{+3.6}_{-3.6}$	$10^9 A_s$	2.107	$2.10^{+0.17}_{-0.17}$	$f\sigma_8(0.57)$	0.4684	$0.468^{+0.022}_{-0.020}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$16.6^{+8.0}_{-8.0}$	$10^9 A_s e^{-2\tau}$	1.8757	$1.877^{+0.024}_{-0.024}$	$\sigma_8(0.57)$	0.6025	$0.602^{+0.024}_{-0.025}$
$A_{217}^{\text{dustTT}}$	82.1	$81^{+10}_{-10}$	$D_{40}$	1222.3	$1226^{+30}_{-29}$	$f_{2000}^{143}$	27.1	$28^{+6}_{-5}$
$A_{100}^{\text{dustEE}}$	0.0818	$0.082^{+0.011}_{-0.011}$	$D_{220}$	5733	$5736^{+77}_{-75}$	$f_{2000}^{143 \times 217}$	30.57	$31^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0495	$0.0492^{+0.0098}_{-0.0099}$	$D_{810}$	2530.9	$2531^{+27}_{-26}$	$f_{2000}^{217}$	104.05	$104.6^{+3.8}_{-3.9}$
$A_{100 \times 217}^{\text{dustEE}}$	0.100	$0.099^{+0.064}_{-0.063}$	$D_{1420}$	814.2	$813.6^{+9.2}_{-9.2}$	$\chi_{\text{lowTEB}}^2$	10494.58	10495.8 ( $\nu$ : 1.3)
$A_{143}^{\text{dustEE}}$	0.1006	$0.100^{+0.013}_{-0.014}$	$D_{2000}$	231.56	$231.2^{+3.2}_{-3.2}$	$\chi_{\text{plik}}^2$	2429.3	2448.8 ( $\nu$ : 21.6)
$A_{143 \times 217}^{\text{dustEE}}$	0.225	$0.223^{+0.093}_{-0.092}$	$n_{s,0.002}$	0.9692	$0.968^{+0.010}_{-0.010}$	$\chi_{\text{prior}}^2$	6.6	19.1 ( $\nu$ : 14.6)
$A_{217}^{\text{dustEE}}$	0.648	$0.65^{+0.26}_{-0.26}$	$Y_P$	0.245420	$0.24541^{+0.00015}_{-0.00015}$	$\chi_{\text{CMB}}^2$	12923.9	12944.7 ( $\nu$ : 22.7)
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.074}_{-0.073}$	$Y_P^{\text{BBN}}$	0.246747	$0.24673^{+0.00015}_{-0.00015}$			
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.132^{+0.057}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.580	$2.586^{+0.063}_{-0.064}$			

Best-fit  $\chi_{\text{eff}}^2 = 12930.56$ ;  $\bar{\chi}_{\text{eff}}^2 = 12963.80$ ;  $R - 1 = 0.00817$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10494.58 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2429.35

### 3.7 base\_Alens\_plikHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022436	$0.02239^{+0.00030}_{-0.00030}$	$A_{143}^{\text{dust}TE}$	0.152	$0.15^{+0.11}_{-0.11}$	$r_*$	144.794	$144.79^{+0.49}_{-0.49}$
$\Omega_c h^2$	0.11840	$0.1185^{+0.0022}_{-0.0022}$	$A_{143 \times 217}^{\text{dust}TE}$	0.331	$0.33^{+0.16}_{-0.16}$	$100\theta_*$	1.04111	$1.04111^{+0.00059}_{-0.00059}$
$100\theta_{\text{MC}}$	1.04093	$1.04093^{+0.00060}_{-0.00060}$	$A_{217}^{\text{dust}TE}$	1.64	$1.65^{+0.50}_{-0.51}$	$D_A/\text{Gpc}$	13.9076	$13.907^{+0.047}_{-0.047}$
$\tau$	0.0581	$0.057^{+0.038}_{-0.042}$	$c_{100}$	0.99829	$0.9982^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.97	$1059.89^{+0.62}_{-0.64}$
$A_L$	1.160	$1.15^{+0.15}_{-0.14}$	$c_{217}$	0.99553	$0.9958^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.44	$147.45^{+0.50}_{-0.50}$
$\ln(10^{10} A_s)$	3.048	$3.046^{+0.080}_{-0.078}$	$H_0$	67.98	$67.9^{+1.0}_{-0.99}$	$k_D$	0.14055	$0.14051^{+0.00059}_{-0.00058}$
$n_s$	0.9697	$0.9678^{+0.0082}_{-0.0082}$	$\Omega_\Lambda$	0.6938	$0.693^{+0.013}_{-0.013}$	$100\theta_D$	0.160720	$0.16077^{+0.00036}_{-0.00036}$
$y_{\text{cal}}$	0.99992	$1.0001^{+0.0049}_{-0.0049}$	$\Omega_m$	0.3062	$0.307^{+0.013}_{-0.013}$	$z_{\text{eq}}$	3365.6	$3368^{+49}_{-49}$
$A_{217}^{\text{CIB}}$	59.7	$62^{+10}_{-10}$	$\Omega_m h^2$	0.14149	$0.1416^{+0.0020}_{-0.0020}$	$k_{\text{eq}}$	0.010272	$0.01028^{+0.00015}_{-0.00015}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.85	—	$\Omega_m h^3$	0.09618	$0.09612^{+0.00060}_{-0.00060}$	$100\theta_{\text{eq}}$	0.8201	$0.8196^{+0.0094}_{-0.0092}$
$A_{143}^{\text{tSZ}}$	6.62	$5.6^{+3.5}_{-3.7}$	$\sigma_8$	0.8086	$0.808^{+0.034}_{-0.032}$	$100\theta_{s,\text{eq}}$	0.45287	$0.4526^{+0.0048}_{-0.0047}$
$A_{100}^{\text{PS}}$	245	$255^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4475	$0.448^{+0.023}_{-0.021}$	$r_{\text{drag}}/D_V(0.57)$	0.07185	$0.07181^{+0.00075}_{-0.00074}$
$A_{143}^{\text{PS}}$	48.4	$41^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6015	$0.601^{+0.027}_{-0.026}$	$H(0.57)$	93.185	$93.14^{+0.46}_{-0.45}$
$A_{143 \times 217}^{\text{PS}}$	55.2	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9808	$0.980^{+0.043}_{-0.041}$	$D_A(0.57)$	1382.5	$1384^{+13}_{-13}$
$A_{217}^{\text{PS}}$	107.9	$99^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.612	$2.60^{+0.11}_{-0.12}$	$F_{\text{AP}}(0.57)$	0.67468	$0.6749^{+0.0034}_{-0.0033}$
$A^{\text{kSZ}}$	0.00	$< 7.05$	$z_{\text{re}}$	8.02	$7.8^{+4.0}_{-4.4}$	$f\sigma_8(0.57)$	0.4688	$0.469^{+0.021}_{-0.019}$
$A_{100}^{\text{dust}TT}$	7.29	$7.4^{+3.6}_{-3.7}$	$10^9 A_s$	2.108	$2.10^{+0.17}_{-0.17}$	$\sigma_8(0.57)$	0.6028	$0.602^{+0.024}_{-0.025}$
$A_{143}^{\text{dust}TT}$	8.86	$8.8^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8767	$1.877^{+0.022}_{-0.022}$	$f_{2000}^{143}$	26.6	$28^{+5}_{-5}$
$A_{143 \times 217}^{\text{dust}TT}$	18.0	$16.6^{+8.0}_{-8.0}$	$D_{40}$	1221.5	$1227^{+27}_{-26}$	$f_{2000}^{143 \times 217}$	30.35	$31^{+4}_{-4}$
$A_{217}^{\text{dust}TT}$	82.4	$81^{+10}_{-10}$	$D_{220}$	5732	$5736^{+78}_{-75}$	$f_{2000}^{217}$	103.76	$104.7^{+3.8}_{-3.7}$
$A_{100}^{\text{dust}EE}$	0.0818	$0.082^{+0.011}_{-0.011}$	$D_{810}$	2532.3	$2531^{+27}_{-27}$	$\chi_{\text{lowTEB}}^2$	10494.50	$10495.9 (\nu: 1.2)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0493	$0.0492^{+0.0097}_{-0.010}$	$D_{1420}$	814.9	$813.6^{+9.2}_{-9.3}$	$\chi_{\text{plik}}^2$	2429.5	$2448.4 (\nu: 21.4)$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.0996^{+0.065}_{-0.062}$	$D_{2000}$	231.85	$231.2^{+3.1}_{-3.2}$	$\chi_{6\text{DF}}^2$	0.003	$0.038 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1007	$0.100^{+0.013}_{-0.014}$	$n_{s,0.002}$	0.9697	$0.9678^{+0.0082}_{-0.0082}$	$\chi_{\text{MGS}}^2$	1.54	$1.53 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.223^{+0.093}_{-0.093}$	$Y_P$	0.245422	$0.24540^{+0.00013}_{-0.00014}$	$\chi_{\text{DR11CMass}}^2$	2.43	$2.76 (\nu: 0.1)$
$A_{217}^{\text{dust}EE}$	0.646	$0.65^{+0.26}_{-0.26}$	$Y_P^{\text{BBN}}$	0.246748	$0.24673^{+0.00013}_{-0.00014}$	$\chi_{\text{DR11LOWZ}}^2$	0.37	$0.54 (\nu: 0.1)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.073}_{-0.074}$	$10^5 D/H$	2.579	$2.587^{+0.056}_{-0.055}$	$\chi_{\text{prior}}^2$	6.5	$19.1 (\nu: 14.9)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.131^{+0.057}_{-0.057}$	Age/Gyr	13.7836	$13.789^{+0.044}_{-0.045}$	$\chi_{\text{CMB}}^2$	12924.0	$12944.2 (\nu: 22.4)$
$A_{100 \times 217}^{\text{dust}TE}$	0.303	$0.30^{+0.17}_{-0.17}$	$z_*$	1089.700	$1089.76^{+0.49}_{-0.49}$	$\chi_{\text{BAO}}^2$	4.34	$4.87 (\nu: 0.3)$

Best-fit  $\chi_{\text{eff}}^2 = 12934.81$ ;  $\bar{\chi}_{\text{eff}}^2 = 12968.23$ ;  $R - 1 = 0.00741$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.54 DR11CMass: 2.43 DR11LOWZ: 0.37 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.50 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2429.50

### 3.8 base\_Alens\_plikHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022465	$0.02241^{+0.00034}_{-0.00033}$	$A_{100 \times 217}^{\text{dustTE}}$	0.306	$0.30^{+0.16}_{-0.17}$	Age/Gyr	13.778	$13.785^{+0.055}_{-0.056}$
$\Omega_c h^2$	0.11809	$0.1183^{+0.0030}_{-0.0030}$	$A_{143}^{\text{dustTE}}$	0.152	$0.15^{+0.11}_{-0.11}$	$z_*$	1089.63	$1089.72^{+0.62}_{-0.62}$
$100\theta_{\text{MC}}$	1.04098	$1.04095^{+0.00064}_{-0.00065}$	$A_{143 \times 217}^{\text{dustTE}}$	0.333	$0.33^{+0.16}_{-0.16}$	$r_*$	144.85	$144.83^{+0.63}_{-0.64}$
$\tau$	0.0586	$0.057^{+0.040}_{-0.039}$	$A_{217}^{\text{dustTE}}$	1.66	$1.65^{+0.50}_{-0.51}$	$100\theta_*$	1.04114	$1.04113^{+0.00063}_{-0.00064}$
$A_L$	1.168	$1.16^{+0.15}_{-0.14}$	$c_{100}$	0.99829	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.913	$13.911^{+0.058}_{-0.059}$
$\ln(10^{10} A_s)$	3.048	$3.046^{+0.079}_{-0.078}$	$c_{217}$	0.99551	$0.9957^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1060.01	$1059.91^{+0.67}_{-0.67}$
$n_s$	0.9706	$0.968^{+0.010}_{-0.010}$	$H_0$	68.12	$68.0^{+1.4}_{-1.4}$	$r_{\text{drag}}$	147.49	$147.49^{+0.61}_{-0.61}$
$y_{\text{cal}}$	0.99966	$1.0001^{+0.0049}_{-0.0049}$	$\Omega_\Lambda$	0.6957	$0.694^{+0.018}_{-0.019}$	$k_D$	0.14052	$0.14048^{+0.00065}_{-0.00063}$
$A_{217}^{\text{CIB}}$	59.3	$62^{+10}_{-10}$	$\Omega_m$	0.3043	$0.306^{+0.019}_{-0.018}$	$100\theta_D$	0.160697	$0.16076^{+0.00038}_{-0.00037}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.89	—	$\Omega_m h^2$	0.14120	$0.1414^{+0.0028}_{-0.0028}$	$z_{\text{eq}}$	3359	$3363^{+67}_{-66}$
$A_{143}^{\text{tSZ}}$	6.62	$5.6^{+3.7}_{-3.7}$	$\Omega_m h^3$	0.09619	$0.09612^{+0.00060}_{-0.00060}$	$k_{\text{eq}}$	0.010252	$0.01026^{+0.00020}_{-0.00020}$
$A_{100}^{\text{PS}}$	244	$254^{+50}_{-50}$	$\sigma_8$	0.8077	$0.807^{+0.034}_{-0.032}$	$100\theta_{\text{eq}}$	0.8214	$0.821^{+0.013}_{-0.013}$
$A_{143}^{\text{PS}}$	48.2	$41^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4455	$0.446^{+0.026}_{-0.024}$	$100\theta_{s,\text{eq}}$	0.4536	$0.4531^{+0.0067}_{-0.0065}$
$A_{143 \times 217}^{\text{PS}}$	55.7	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.5999	$0.600^{+0.029}_{-0.027}$	$r_{\text{drag}}/D_V(0.57)$	0.07196	$0.0719^{+0.0011}_{-0.0010}$
$A_{217}^{\text{PS}}$	108.1	$99^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9785	$0.979^{+0.046}_{-0.042}$	$H(0.57)$	93.25	$93.19^{+0.63}_{-0.59}$
$A^{\text{kSZ}}$	0.00	$< 7.04$	$\langle d^2 \rangle^{1/2}$	2.614	$2.60^{+0.11}_{-0.12}$	$D_A(0.57)$	1380.6	$1382^{+18}_{-19}$
$A_{100}^{\text{dustTT}}$	7.37	$7.4^{+3.6}_{-3.7}$	$z_{\text{re}}$	8.06	$7.8^{+4.0}_{-4.3}$	$F_{\text{AP}}(0.57)$	0.67419	$0.6746^{+0.0047}_{-0.0047}$
$A_{143}^{\text{dustTT}}$	8.90	$8.8^{+3.6}_{-3.6}$	$10^9 A_s$	2.108	$2.10^{+0.17}_{-0.17}$	$f\sigma_8(0.57)$	0.4677	$0.468^{+0.022}_{-0.020}$
$A_{143 \times 217}^{\text{dustTT}}$	18.1	$16.6^{+8.0}_{-8.0}$	$10^9 A_s e^{-2\tau}$	1.8745	$1.876^{+0.024}_{-0.023}$	$\sigma_8(0.57)$	0.6026	$0.602^{+0.025}_{-0.023}$
$A_{217}^{\text{dustTT}}$	82.6	$81^{+10}_{-10}$	$D_{40}$	1219.1	$1225^{+29}_{-28}$	$f_{2000}^{143}$	26.4	$28^{+6}_{-5}$
$A_{100}^{\text{dustEE}}$	0.0818	$0.082^{+0.011}_{-0.011}$	$D_{220}$	5731	$5737^{+78}_{-75}$	$f_{2000}^{143 \times 217}$	30.14	$31^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0496	$0.0492^{+0.0097}_{-0.010}$	$D_{810}$	2530.7	$2531^{+27}_{-26}$	$f_{2000}^{217}$	103.54	$104.6^{+3.8}_{-3.8}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.099^{+0.064}_{-0.062}$	$D_{1420}$	814.7	$813.7^{+9.2}_{-9.3}$	$\chi_{\text{lowTEB}}^2$	10494.33	$10495.8 (\nu: 1.3)$
$A_{143}^{\text{dustEE}}$	0.1010	$0.101^{+0.013}_{-0.014}$	$D_{2000}$	231.90	$231.3^{+3.2}_{-3.2}$	$\chi_{\text{plik}}^2$	2429.7	$2448.9 (\nu: 21.8)$
$A_{143 \times 217}^{\text{dustEE}}$	0.225	$0.223^{+0.093}_{-0.093}$	$n_{s,0.002}$	0.9706	$0.968^{+0.010}_{-0.010}$	$\chi_{\text{JLA}}^2$	706.581	$706.68 (\nu: 0.0)$
$A_{217}^{\text{dustEE}}$	0.651	$0.65^{+0.25}_{-0.26}$	$Y_P$	0.245434	$0.24541^{+0.00015}_{-0.00015}$	$\chi_{\text{prior}}^2$	6.4	$19.1 (\nu: 14.9)$
$A_{100}^{\text{dustTE}}$	0.140	$0.140^{+0.073}_{-0.074}$	$Y_P^{\text{BBN}}$	0.246761	$0.24674^{+0.00015}_{-0.00015}$	$\chi_{\text{CMB}}^2$	12924.0	$12944.6 (\nu: 22.7)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.057}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.574	$2.583^{+0.063}_{-0.062}$			

Best-fit  $\chi_{\text{eff}}^2 = 13637.05$ ;  $\bar{\chi}_{\text{eff}}^2 = 13670.44$ ;  $R - 1 = 0.00864$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10494.33 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2429.70 SN - JLA December\_2013: 706.58

### 3.9 base\_Alens\_plikHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022484	$0.02242^{+0.00034}_{-0.00034}$	$A_{100 \times 217}^{\text{dustTE}}$	0.304	$0.30^{+0.16}_{-0.17}$	Age/Gyr	13.775	$13.783^{+0.056}_{-0.056}$
$\Omega_c h^2$	0.11791	$0.1182^{+0.0031}_{-0.0030}$	$A_{143}^{\text{dustTE}}$	0.150	$0.15^{+0.11}_{-0.11}$	$z_*$	1089.59	$1089.70^{+0.63}_{-0.62}$
$100\theta_{\text{MC}}$	1.04099	$1.04096^{+0.00064}_{-0.00065}$	$A_{143 \times 217}^{\text{dustTE}}$	0.331	$0.33^{+0.16}_{-0.16}$	$r_*$	144.89	$144.85^{+0.64}_{-0.65}$
$\tau$	0.0582	$0.057^{+0.039}_{-0.039}$	$A_{217}^{\text{dustTE}}$	1.65	$1.65^{+0.50}_{-0.51}$	$100\theta_*$	1.04116	$1.04114^{+0.00063}_{-0.00064}$
$A_L$	1.177	$1.16^{+0.15}_{-0.15}$	$c_{100}$	0.99829	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.916	$13.913^{+0.059}_{-0.060}$
$\ln(10^{10} A_s)$	3.047	$3.046^{+0.079}_{-0.078}$	$c_{217}$	0.99551	$0.9957^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1060.05	$1059.93^{+0.65}_{-0.68}$
$n_s$	0.9712	$0.969^{+0.010}_{-0.010}$	$H_0$	68.21	$68.0^{+1.4}_{-1.4}$	$r_{\text{drag}}$	147.52	$147.50^{+0.62}_{-0.62}$
$y_{\text{cal}}$	0.99986	$1.0001^{+0.0049}_{-0.0049}$	$\Omega_\Lambda$	0.6969	$0.695^{+0.018}_{-0.019}$	$k_D$	0.14050	$0.14047^{+0.00065}_{-0.00063}$
$A_{217}^{\text{CIB}}$	58.5	$62^{+10}_{-10}$	$\Omega_m$	0.3031	$0.305^{+0.019}_{-0.018}$	$100\theta_D$	0.160680	$0.16075^{+0.00038}_{-0.00037}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.998	—	$\Omega_m h^2$	0.14104	$0.1413^{+0.0029}_{-0.0028}$	$z_{\text{eq}}$	3355	$3361^{+68}_{-67}$
$A_{143}^{\text{tSZ}}$	6.61	$5.6^{+3.7}_{-3.7}$	$\Omega_m h^3$	0.09620	$0.09613^{+0.00060}_{-0.00060}$	$k_{\text{eq}}$	0.010240	$0.01026^{+0.00021}_{-0.00020}$
$A_{100}^{\text{PS}}$	242	$254^{+50}_{-60}$	$\sigma_8$	0.8069	$0.807^{+0.034}_{-0.032}$	$100\theta_{\text{eq}}$	0.8222	$0.821^{+0.013}_{-0.013}$
$A_{143}^{\text{PS}}$	49.5	$41^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4443	$0.446^{+0.026}_{-0.024}$	$100\theta_{s,\text{eq}}$	0.4539	$0.4533^{+0.0067}_{-0.0067}$
$A_{143 \times 217}^{\text{PS}}$	58.6	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.5987	$0.600^{+0.029}_{-0.027}$	$r_{\text{drag}}/D_V(0.57)$	0.07203	$0.0719^{+0.0011}_{-0.0010}$
$A_{217}^{\text{PS}}$	109.3	$99^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9770	$0.978^{+0.045}_{-0.042}$	$H(0.57)$	93.29	$93.21^{+0.64}_{-0.61}$
$A^{\text{kSZ}}$	0.00	$< 7.01$	$\langle d^2 \rangle^{1/2}$	2.620	$2.60^{+0.11}_{-0.12}$	$D_A(0.57)$	1379.4	$1382^{+19}_{-19}$
$A_{100}^{\text{dustTT}}$	7.31	$7.4^{+3.6}_{-3.7}$	$z_{\text{re}}$	8.02	$7.8^{+4.0}_{-4.3}$	$F_{\text{AP}}(0.57)$	0.67390	$0.6744^{+0.0048}_{-0.0047}$
$A_{143}^{\text{dustTT}}$	8.88	$8.8^{+3.6}_{-3.6}$	$10^9 A_s$	2.106	$2.10^{+0.17}_{-0.17}$	$f\sigma_8(0.57)$	0.4670	$0.467^{+0.022}_{-0.020}$
$A_{143 \times 217}^{\text{dustTT}}$	18.3	$16.6^{+8.0}_{-8.0}$	$10^9 A_s e^{-2\tau}$	1.8747	$1.875^{+0.024}_{-0.023}$	$\sigma_8(0.57)$	0.6023	$0.602^{+0.025}_{-0.023}$
$A_{217}^{\text{dustTT}}$	82.8	$81^{+10}_{-10}$	$D_{40}$	1218.1	$1225^{+29}_{-29}$	$f_{2000}^{143}$	26.1	$28^{+6}_{-6}$
$A_{100}^{\text{dustEE}}$	0.0818	$0.082^{+0.011}_{-0.011}$	$D_{220}$	5734	$5738^{+78}_{-75}$	$f_{2000}^{143 \times 217}$	29.99	$31^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0496	$0.0493^{+0.0097}_{-0.010}$	$D_{810}$	2531.8	$2530^{+27}_{-27}$	$f_{2000}^{217}$	103.35	$104.5^{+3.8}_{-3.8}$
$A_{100 \times 217}^{\text{dustEE}}$	0.098	$0.099^{+0.064}_{-0.062}$	$D_{1420}$	815.2	$813.7^{+9.2}_{-9.2}$	$\chi_{\text{lowTEB}}^2$	10494.22	$10495.7 (\nu: 1.3)$
$A_{143}^{\text{dustEE}}$	0.1009	$0.101^{+0.013}_{-0.014}$	$D_{2000}$	232.16	$231.3^{+3.1}_{-3.2}$	$\chi_{\text{plik}}^2$	2429.8	$2448.9 (\nu: 21.9)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.223^{+0.093}_{-0.094}$	$n_{s,0.002}$	0.9712	$0.969^{+0.010}_{-0.010}$	$\chi_{\text{H070p6}}^2$	0.52	$0.64 (\nu: 0.1)$
$A_{217}^{\text{dustEE}}$	0.654	$0.65^{+0.25}_{-0.26}$	$Y_P$	0.245443	$0.24542^{+0.00015}_{-0.00015}$	$\chi_{\text{prior}}^2$	6.5	$19.2 (\nu: 14.9)$
$A_{100}^{\text{dustTE}}$	0.141	$0.140^{+0.074}_{-0.074}$	$Y_P^{\text{BBN}}$	0.246770	$0.24674^{+0.00015}_{-0.00015}$	$\chi_{\text{CMB}}^2$	12924.0	$12944.6 (\nu: 22.7)$
$A_{100 \times 143}^{\text{dustTE}}$	0.130	$0.131^{+0.057}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.570	$2.581^{+0.063}_{-0.062}$			

Best-fit  $\chi_{\text{eff}}^2 = 12931.01$ ;  $\bar{\chi}_{\text{eff}}^2 = 12964.42$ ;  $R - 1 = 0.00877$

$\chi_{\text{eff}}^2$ : CMB - lowl.SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10494.22 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2429.81 Hubble - H070p6: 0.52

### 3.10 base\_Alens\_plikHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00035}_{-0.00033}$	$A_{100 \times 217}^{\text{dustTE}}$	$0.30^{+0.17}_{-0.17}$	Age/Gyr	$13.787^{+0.057}_{-0.058}$
$\Omega_c h^2$	$0.1184^{+0.0032}_{-0.0031}$	$A_{143}^{\text{dustTE}}$	$0.15^{+0.11}_{-0.10}$	$z_*$	$1089.74^{+0.64}_{-0.64}$
$100\theta_{\text{MC}}$	$1.04093^{+0.00065}_{-0.00065}$	$A_{143 \times 217}^{\text{dustTE}}$	$0.33^{+0.16}_{-0.16}$	$r_*$	$144.82^{+0.66}_{-0.67}$
$\tau$	$0.066^{+0.030}_{-0.025}$	$A_{217}^{\text{dustTE}}$	$1.65^{+0.50}_{-0.50}$	$100\theta_*$	$1.04111^{+0.00063}_{-0.00064}$
$A_L$	$1.13^{+0.14}_{-0.13}$	$c_{100}$	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	$13.910^{+0.060}_{-0.061}$
$\ln(10^{10} A_s)$	$3.063^{+0.061}_{-0.052}$	$c_{217}$	$0.9957^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	$1059.90^{+0.68}_{-0.68}$
$n_s$	$0.968^{+0.010}_{-0.010}$	$H_0$	$67.9^{+1.5}_{-1.4}$	$r_{\text{drag}}$	$147.47^{+0.63}_{-0.64}$
$y_{\text{cal}}$	$1.0001^{+0.0049}_{-0.0049}$	$\Omega_\Lambda$	$0.693^{+0.019}_{-0.020}$	$k_D$	$0.14049^{+0.00065}_{-0.00064}$
$A_{217}^{\text{CIB}}$	$62^{+10}_{-10}$	$\Omega_m$	$0.307^{+0.020}_{-0.019}$	$100\theta_D$	$0.16077^{+0.00038}_{-0.00037}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\Omega_m h^2$	$0.1415^{+0.0030}_{-0.0029}$	$z_{\text{eq}}$	$3365^{+71}_{-69}$
$A_{143}^{\text{tSZ}}$	$5.6^{+3.7}_{-3.7}$	$\Omega_m h^3$	$0.09611^{+0.00059}_{-0.00060}$	$k_{\text{eq}}$	$0.01027^{+0.00022}_{-0.00021}$
$A_{100}^{\text{PS}}$	$254^{+50}_{-60}$	$\sigma_8$	$0.814^{+0.028}_{-0.025}$	$100\theta_{\text{eq}}$	$0.820^{+0.014}_{-0.013}$
$A_{143}^{\text{PS}}$	$41^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.024}_{-0.023}$	$100\theta_{\text{s,eq}}$	$0.4529^{+0.0069}_{-0.0068}$
$A_{143 \times 217}^{\text{PS}}$	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.026}_{-0.023}$	$r_{\text{drag}}/D_V(0.57)$	$0.0718^{+0.0011}_{-0.0011}$
$A_{217}^{\text{PS}}$	$99^{+20}_{-20}$	$\sigma_8/h^{0.5}$	$0.988^{+0.040}_{-0.036}$	$H(0.57)$	$93.16^{+0.65}_{-0.62}$
$A^{\text{kSZ}}$	$< 7.09$	$\langle d^2 \rangle^{1/2}$	$2.60^{+0.11}_{-0.12}$	$D_A(0.57)$	$1383^{+19}_{-19}$
$A_{100}^{\text{dustTT}}$	$7.4^{+3.6}_{-3.6}$	$z_{\text{re}}$	$< 11.2$	$F_{\text{AP}}(0.57)$	$0.6748^{+0.0050}_{-0.0049}$
$A_{143}^{\text{dustTT}}$	$8.8^{+3.6}_{-3.5}$	$10^9 A_s$	$2.14^{+0.13}_{-0.11}$	$f\sigma_8(0.57)$	$0.472^{+0.019}_{-0.017}$
$A_{143 \times 217}^{\text{dustTT}}$	$16.6^{+8.0}_{-8.1}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.024}_{-0.024}$	$\sigma_8(0.57)$	$0.607^{+0.019}_{-0.017}$
$A_{217}^{\text{dustTT}}$	$81^{+10}_{-10}$	$D_{40}$	$1228^{+29}_{-29}$	$f_{2000}^{143}$	$28^{+6}_{-6}$
$A_{100}^{\text{dustEE}}$	$0.082^{+0.011}_{-0.011}$	$D_{220}$	$5735^{+78}_{-75}$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	$0.0492^{+0.0098}_{-0.010}$	$D_{810}$	$2531^{+27}_{-27}$	$f_{2000}^{217}$	$104.6^{+3.9}_{-3.8}$
$A_{100 \times 217}^{\text{dustEE}}$	$0.099^{+0.064}_{-0.061}$	$D_{1420}$	$813.7^{+9.2}_{-9.2}$	$\chi_{\text{lowTEB}}^2$	$10495.6 (\nu: 1.4)$
$A_{143}^{\text{dustEE}}$	$0.100^{+0.013}_{-0.013}$	$D_{2000}$	$231.3^{+3.1}_{-3.2}$	$\chi_{\text{plik}}^2$	$2448.8 (\nu: 21.7)$
$A_{143 \times 217}^{\text{dustEE}}$	$0.223^{+0.093}_{-0.093}$	$n_{\text{s},0.002}$	$0.968^{+0.010}_{-0.010}$	$\chi_{\text{prior}}^2$	$19.1 (\nu: 14.9)$
$A_{217}^{\text{dustEE}}$	$0.65^{+0.25}_{-0.26}$	$Y_{\text{P}}$	$0.24541^{+0.00015}_{-0.00015}$	$\chi_{\text{CMB}}^2$	$12944.4 (\nu: 22.6)$
$A_{100}^{\text{dustTE}}$	$0.141^{+0.073}_{-0.075}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24673^{+0.00015}_{-0.00015}$		
$A_{100 \times 143}^{\text{dustTE}}$	$0.131^{+0.057}_{-0.057}$	$10^5 \text{D/H}$	$2.585^{+0.063}_{-0.064}$		

$$\bar{\chi}_{\text{eff}}^2 = 12963.55; R - 1 = 0.01233$$

### 3.11 base\_Alens\_CamSpecHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02266	$0.02265^{+0.00058}_{-0.00056}$ (+0.1 $\sigma$ )	$\beta_1^1$	-0.06	$-0.1^{+1.9}_{-2.0}$	$r_*$	145.16	$145.2^{+1.0}_{-1.0}$ (+0.1 $\sigma$ )
$\Omega_c h^2$	0.11635	$0.1163^{+0.0049}_{-0.0047}$ (-0.1 $\sigma$ )	$H_0$	69.06	$69.1^{+2.3}_{-2.3}$ (+0.1 $\sigma$ )	$100\theta_*$	1.04158	$1.0416^{+0.0010}_{-0.00099}$ (+0.1 $\sigma$ )
$100\theta_{MC}$	1.04140	$1.0414^{+0.0010}_{-0.0010}$ (+0.1 $\sigma$ )	$\Omega_\Lambda$	0.7071	$0.707^{+0.027}_{-0.030}$ (+0.1 $\sigma$ )	$z_{drag}$	1060.31	$1060.3^{+1.1}_{-1.1}$ (+0.0 $\sigma$ )
$\tau$	0.0616	$0.060^{+0.040}_{-0.044}$ (+0.0 $\sigma$ )	$\Omega_m$	0.2929	$0.293^{+0.030}_{-0.027}$ (-0.1 $\sigma$ )	$r_{drag}$	147.75	$147.76^{+0.97}_{-0.96}$ (+0.1 $\sigma$ )
$A_L$	1.226	$1.23^{+0.21}_{-0.19}$ (+0.1 $\sigma$ )	$\Omega_m h^2$	0.13965	$0.1396^{+0.0045}_{-0.0043}$ (-0.1 $\sigma$ )	$k_D$	0.14041	$0.1404^{+0.0010}_{-0.00099}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.048	$3.044^{+0.081}_{-0.082}$ (-0.0 $\sigma$ )	$\Omega_m h^3$	0.09644	$0.0964^{+0.0010}_{-0.00097}$ (+0.0 $\sigma$ )	$100\theta_D$	0.16055	$0.16057^{+0.00060}_{-0.00058}$ (-0.1 $\sigma$ )
$n_s$	0.9770	$0.977^{+0.014}_{-0.014}$ (+0.4 $\sigma$ )	$\sigma_8$	0.8030	$0.801^{+0.035}_{-0.036}$ (-0.0 $\sigma$ )	$z_{eq}$	3322	$3321^{+110}_{-100}$ (-0.1 $\sigma$ )
$y_{cal}$	1.00008	$0.99998^{+0.0049}_{-0.0049}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4346	$0.434^{+0.035}_{-0.033}$ (-0.1 $\sigma$ )	$100\theta_{eq}$	0.8291	$0.829^{+0.021}_{-0.021}$ (+0.1 $\sigma$ )
$A_{100}^{PS}$	231.4	$234^{+40}_{-50}$ (-0.5 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.5908	$0.590^{+0.035}_{-0.034}$ (-0.1 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07264	$0.0727^{+0.0018}_{-0.0017}$ (+0.1 $\sigma$ )
$A_{143}^{PS}$	31.5	$33^{+20}_{-20}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	0.966	$0.965^{+0.051}_{-0.051}$ (-0.1 $\sigma$ )	$H(0.57)$	93.70	$93.7^{+1.1}_{-1.1}$ (+0.1 $\sigma$ )
$A_{217}^{PS}$	103.4	$101^{+30}_{-30}$ (+0.3 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.643	$2.64^{+0.14}_{-0.15}$ (-0.0 $\sigma$ )	$D_A(0.57)$	1368.0	$1368^{+31}_{-31}$ (-0.1 $\sigma$ )
$A_{217}^{CIB}$	44.7	$42^{+10}_{-10}$ (-2.8 $\sigma$ )	$z_{re}$	8.27	$8.0^{+4.0}_{-4.4}$ (+0.0 $\sigma$ )	$F_{AP}(0.57)$	0.6712	$0.6712^{+0.0078}_{-0.0073}$ (-0.1 $\sigma$ )
$A_{143}^{tSZ}$	5.57	$< 7.17$ (-1.0 $\sigma$ )	$10^9 A_s$	2.107	$2.10^{+0.17}_{-0.18}$ (-0.0 $\sigma$ )	$f\sigma_8(0.57)$	0.4620	$0.461^{+0.025}_{-0.025}$ (-0.1 $\sigma$ )
$r_{143 \times 217}^{PS}$	0.493	$0.53^{+0.25}_{-0.24}$	$10^9 A_s e^{-2\tau}$	1.8630	$1.862^{+0.029}_{-0.029}$ (-0.4 $\sigma$ )	$\sigma_8(0.57)$	0.6020	$0.601^{+0.025}_{-0.025}$ (-0.0 $\sigma$ )
$\xi^{tSZ \times CIB}$	0.03	—	$D_{40}$	1203.4	$1204^{+36}_{-34}$ (-0.5 $\sigma$ )	$Y_P^{BBN}$	0.246423	$0.24642^{+0.00024}_{-0.00024}$ (-3.2 $\sigma$ )
$A^{kSZ}$	0.7	—	$D_{220}$	5720	$5719^{+81}_{-82}$ (-0.5 $\sigma$ )	$f_{2000}^{143}$	25.1	$25^{+6}_{-6}$ (-0.4 $\sigma$ )
$A_{100}^{dust}$	1.001	$0.99^{+0.38}_{-0.38}$	$D_{810}$	2524.3	$2523^{+28}_{-28}$ (-0.3 $\sigma$ )	$f_{2000}^{217}$	103.43	$103.7^{+4.5}_{-4.5}$ (+0.1 $\sigma$ )
$A_{143}^{dust}$	1.011	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	814.9	$814^{+10}_{-9.9}$ (-0.0 $\sigma$ )	$f_{2000}^{143 \times 217}$	28.47	$29^{+5}_{-5}$ (-0.4 $\sigma$ )
$A_{217}^{dust}$	1.225	$1.23^{+0.23}_{-0.23}$	$n_{s,0.002}$	0.9770	$0.977^{+0.014}_{-0.014}$ (+0.4 $\sigma$ )	$\chi_{lowTEB}^2$	10493.16	$10494.3$ ( $\nu: 1.3$ ) (-0.3 $\sigma$ )
$A_{143 \times 217}^{dust}$	0.992	$0.96^{+0.36}_{-0.35}$	$Y_P$	0.245100	$0.24509^{+0.00024}_{-0.00024}$ (-3.2 $\sigma$ )	$\chi_{CamSpec}^2$	8042.9	$8057.7$ ( $\nu: 15.9$ )
$c_{100}$	0.99693	$0.9969^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	Age/Gyr	13.738	$13.738^{+0.096}_{-0.098}$ (-0.1 $\sigma$ )	$\chi_{prior}^2$	2.9	$8.5$ ( $\nu: 6.2$ ) (+0.4 $\sigma$ )
$c_{217}$	0.99646	$0.9967^{+0.0035}_{-0.0035}$ (+0.8 $\sigma$ )	$z_*$	1089.23	$1089.2^{+1.0}_{-1.0}$ (-0.1 $\sigma$ )	$\chi_{CMB}^2$	18536.1	$18552.1$ ( $\nu: 16.4$ ) (+1275.8 $\sigma$ )

Best-fit  $\chi_{eff}^2 = 18539.04$ ;  $\Delta\chi_{eff}^2 = 7283.54$ ;  $\bar{\chi}_{eff}^2 = 18560.53$ ;  $\Delta\bar{\chi}_{eff}^2 = 7283.35$ ;  $R - 1 = 0.00761$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.16 ( $\Delta$  -0.24) CamSpec like\_v9.10CMH\_unified: 8042.94

### 3.12 base\_Alens\_CamSpecHM\_TT\_lowTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02249^{+0.00045}_{-0.00043} \quad (+0.0\sigma)$	$\Omega_\Lambda$	$0.696^{+0.015}_{-0.016} \quad (+0.1\sigma)$	$k_D$	$0.14058^{+0.00089}_{-0.00087} \quad (-0.0\sigma)$
$\Omega_c h^2$	$0.1181^{+0.0026}_{-0.0026} \quad (-0.1\sigma)$	$\Omega_m$	$0.304^{+0.016}_{-0.015} \quad (-0.1\sigma)$	$100\theta_D$	$0.16068^{+0.00053}_{-0.00054} \quad (-0.0\sigma)$
$100\theta_{MC}$	$1.04117^{+0.00087}_{-0.00086} \quad (+0.0\sigma)$	$\Omega_m h^2$	$0.1412^{+0.0025}_{-0.0024} \quad (-0.1\sigma)$	$z_{eq}$	$3360^{+59}_{-58} \quad (-0.1\sigma)$
$\tau$	$0.057^{+0.038}_{-0.042} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.09633^{+0.00097}_{-0.00094} \quad (-0.0\sigma)$	$100\theta_{eq}$	$0.822^{+0.011}_{-0.011} \quad (+0.1\sigma)$
$A_L$	$1.19^{+0.18}_{-0.17} \quad (+0.0\sigma)$	$\sigma_8$	$0.806^{+0.033}_{-0.033} \quad (-0.0\sigma)$	$r_{drag}/D_V(0.57)$	$0.07202^{+0.00090}_{-0.00088} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.043^{+0.079}_{-0.080} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.444^{+0.024}_{-0.023} \quad (-0.1\sigma)$	$H(0.57)$	$93.32^{+0.63}_{-0.59} \quad (+0.1\sigma)$
$n_s$	$0.9720^{+0.0094}_{-0.0092} \quad (+0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.599^{+0.027}_{-0.027} \quad (-0.1\sigma)$	$D_A(0.57)$	$1379^{+16}_{-17} \quad (-0.1\sigma)$
$y_{cal}$	$1.0000^{+0.0048}_{-0.0050} \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.977^{+0.043}_{-0.043} \quad (-0.0\sigma)$	$F_{AP}(0.57)$	$0.6740^{+0.0040}_{-0.0040} \quad (-0.1\sigma)$
$A_{100}^{PS}$	$237^{+40}_{-50} \quad (-0.4\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.63^{+0.14}_{-0.15} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.467^{+0.021}_{-0.020} \quad (-0.0\sigma)$
$A_{143}^{PS}$	$35^{+20}_{-20} \quad (-0.6\sigma)$	$z_{re}$	$7.8^{+3.9}_{-4.3} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.602^{+0.025}_{-0.024} \quad (-0.0\sigma)$
$A_{217}^{PS}$	$101^{+30}_{-30} \quad (+0.2\sigma)$	$10^9 A_s$	$2.10^{+0.17}_{-0.17} \quad (-0.1\sigma)$	$Y_P^{BBN}$	$0.24635^{+0.00019}_{-0.00018} \quad (-4.2\sigma)$
$A_{217}^{CIB}$	$43^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.023}_{-0.023} \quad (-0.4\sigma)$	$f_{2000}^{143}$	$26^{+6}_{-6} \quad (-0.4\sigma)$
$A_{143}^{tSZ}$	$< 7.02 \quad (-1.0\sigma)$	$D_{40}$	$1214^{+28}_{-28} \quad (-0.6\sigma)$	$f_{2000}^{217}$	$104.5^{+4.1}_{-4.2} \quad (+0.1\sigma)$
$r_{143 \times 217}^{PS}$	$0.53^{+0.23}_{-0.23}$	$D_{220}$	$5711^{+81}_{-80} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$29^{+4}_{-5} \quad (-0.4\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{810}$	$2525^{+27}_{-27} \quad (-0.2\sigma)$	$\chi_{lowTEB}^2$	$10494.9 \quad (\nu: 1.1) \quad (-0.4\sigma)$
$A^{kSZ}$	—	$D_{1420}$	$813.7^{+9.8}_{-9.5} \quad (-0.0\sigma)$	$\chi_{CamSpec}^2$	$8056.9 \quad (\nu: 14.7)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.39}$	$n_{s,0.002}$	$0.9720^{+0.0094}_{-0.0092} \quad (+0.5\sigma)$	$\chi_{6DF}^2$	$0.046 \quad (\nu: 0.0) \quad (+0.0\sigma)$
$A_{143}^{dust}$	$1.02^{+0.37}_{-0.36}$	$Y_P$	$0.24503^{+0.00019}_{-0.00018} \quad (-4.3\sigma)$	$\chi_{MGS}^2$	$1.84 \quad (\nu: 0.2) \quad (+0.1\sigma)$
$A_{217}^{dust}$	$1.23^{+0.23}_{-0.23}$	$Age/Gyr$	$13.770^{+0.062}_{-0.064} \quad (-0.0\sigma)$	$\chi_{DR11CMass}^2$	$3.03 \quad (\nu: 0.4) \quad (+0.1\sigma)$
$A_{143 \times 217}^{dust}$	$0.97^{+0.36}_{-0.34}$	$z_*$	$1089.59^{+0.65}_{-0.66} \quad (-0.1\sigma)$	$\chi_{DR11LOWZ}^2$	$0.38 \quad (\nu: 0.1) \quad (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$r_*$	$144.83^{+0.63}_{-0.62} \quad (+0.1\sigma)$	$\chi_{prior}^2$	$8.5 \quad (\nu: 6.3) \quad (+0.4\sigma)$
$c_{217}$	$0.9968^{+0.0036}_{-0.0035} \quad (+0.8\sigma)$	$100\theta_*$	$1.04135^{+0.00086}_{-0.00084} \quad (+0.1\sigma)$	$\chi_{CMB}^2$	$18551.8 \quad (\nu: 15.6) \quad (+1311.2\sigma)$
$\beta_1^1$	$0.0^{+1.9}_{-1.9}$	$z_{drag}$	$1060.06^{+0.99}_{-0.92} \quad (-0.0\sigma)$	$\chi_{BAO}^2$	$5.3 \quad (\nu: 0.8) \quad (+0.1\sigma)$
$H_0$	$68.2^{+1.2}_{-1.2} \quad (+0.1\sigma)$	$r_{drag}$	$147.46^{+0.68}_{-0.66} \quad (+0.1\sigma)$		

$$\bar{\chi}_{eff}^2 = 18565.55; \Delta\bar{\chi}_{eff}^2 = 7283.39; R - 1 = 0.01235$$

### 3.13 base\_Alens\_CamSpecHM\_TT\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02265^{+0.00055}_{-0.00053} \quad (+0.1\sigma)$	$H_0$	$69.1^{+2.2}_{-2.1} \quad (+0.1\sigma)$	$z_{\text{drag}}$	$1060.3^{+1.1}_{-1.0} \quad (+0.0\sigma)$
$\Omega_c h^2$	$0.1163^{+0.0045}_{-0.0044} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.707^{+0.026}_{-0.028} \quad (+0.1\sigma)$	$r_{\text{drag}}$	$147.76^{+0.93}_{-0.91} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.0414^{+0.0010}_{-0.00099} \quad (+0.1\sigma)$	$\Omega_m$	$0.293^{+0.028}_{-0.026} \quad (-0.1\sigma)$	$k_D$	$0.14038^{+0.00098}_{-0.00097} \quad (-0.0\sigma)$
$\tau$	$0.060^{+0.041}_{-0.041} \quad (+0.0\sigma)$	$\Omega_m h^2$	$0.1396^{+0.0042}_{-0.0040} \quad (-0.1\sigma)$	$100\theta_D$	$0.16057^{+0.00058}_{-0.00057} \quad (-0.1\sigma)$
$A_L$	$1.23^{+0.21}_{-0.19} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.0964^{+0.0010}_{-0.00096} \quad (+0.0\sigma)$	$z_{\text{eq}}$	$3322^{+99}_{-96} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.044^{+0.080}_{-0.083} \quad (-0.0\sigma)$	$\sigma_8$	$0.801^{+0.035}_{-0.035} \quad (-0.0\sigma)$	$100\theta_{\text{eq}}$	$0.829^{+0.020}_{-0.020} \quad (+0.1\sigma)$
$n_s$	$0.977^{+0.013}_{-0.013} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.434^{+0.032}_{-0.031} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0727^{+0.0016}_{-0.0016} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$0.99997^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.590^{+0.033}_{-0.033} \quad (-0.1\sigma)$	$H(0.57)$	$93.7^{+1.0}_{-0.97} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$234^{+40}_{-50} \quad (-0.5\sigma)$	$\sigma_8/h^{0.5}$	$0.965^{+0.050}_{-0.050} \quad (-0.1\sigma)$	$D_A(0.57)$	$1368^{+28}_{-28} \quad (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$33^{+20}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.64^{+0.14}_{-0.15} \quad (-0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.6713^{+0.0071}_{-0.0068} \quad (-0.1\sigma)$
$A_{217}^{\text{PS}}$	$101^{+30}_{-30} \quad (+0.3\sigma)$	$z_{\text{re}}$	$8.0^{+3.9}_{-4.4} \quad (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.461^{+0.024}_{-0.024} \quad (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$42^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.10^{+0.17}_{-0.17} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.601^{+0.025}_{-0.025} \quad (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 7.18 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.862^{+0.027}_{-0.027} \quad (-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24642^{+0.00023}_{-0.00023} \quad (-3.4\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.53^{+0.24}_{-0.24}$	$D_{40}$	$1204^{+34}_{-33} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$25^{+6}_{-6} \quad (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5719^{+81}_{-82} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$103.7^{+4.4}_{-4.5} \quad (+0.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2523^{+28}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$29^{+5}_{-5} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{1420}$	$814^{+10}_{-9.8} \quad (-0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10494.3 \quad (\nu: 1.2) \quad (-0.3\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$n_{\text{s},0.002}$	$0.977^{+0.013}_{-0.013} \quad (+0.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$8057.6 \quad (\nu: 15.5)$
$A_{217}^{\text{dust}}$	$1.23^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.24509^{+0.00023}_{-0.00023} \quad (-3.4\sigma)$	$\chi_{\text{JLA}}^2$	$706.65 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.96^{+0.36}_{-0.35}$	$\text{Age}/\text{Gyr}$	$13.738^{+0.090}_{-0.092} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.5 \quad (\nu: 6.2) \quad (+0.4\sigma)$
$c_{100}$	$0.9969^{+0.0019}_{-0.0019} \quad (-1.3\sigma)$	$z_*$	$1089.25^{+0.96}_{-0.95} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18551.9 \quad (\nu: 16.0) \quad (+1298.0\sigma)$
$c_{217}$	$0.9967^{+0.0036}_{-0.0035} \quad (+0.8\sigma)$	$r_*$	$145.17^{+0.95}_{-0.94} \quad (+0.1\sigma)$		
$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$100\theta_*$	$1.04159^{+0.00097}_{-0.00097} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 19267.03; \Delta\bar{\chi}_{\text{eff}}^2 = 7283.35; R - 1 = 0.00888$$



### 3.14 base\_Alens\_CamSpecHM\_TT\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02268^{+0.00055}_{-0.00054} \quad (+0.1\sigma)$	$H_0$	$69.2^{+2.2}_{-2.2} \quad (+0.1\sigma)$	$z_{\text{drag}}$	$1060.3^{+1.1}_{-1.1} \quad (+0.0\sigma)$
$\Omega_c h^2$	$0.1160^{+0.0046}_{-0.0044} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.709^{+0.026}_{-0.028} \quad (+0.1\sigma)$	$r_{\text{drag}}$	$147.82^{+0.95}_{-0.93} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.0415^{+0.0010}_{-0.0010} \quad (+0.1\sigma)$	$\Omega_m$	$0.291^{+0.028}_{-0.026} \quad (-0.1\sigma)$	$k_D$	$0.14034^{+0.00099}_{-0.0010} \quad (-0.0\sigma)$
$\tau$	$0.060^{+0.041}_{-0.041} \quad (+0.0\sigma)$	$\Omega_m h^2$	$0.1393^{+0.0043}_{-0.0041} \quad (-0.1\sigma)$	$100\theta_D$	$0.16054^{+0.00059}_{-0.00056} \quad (-0.1\sigma)$
$A_L$	$1.24^{+0.20}_{-0.19} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.0964^{+0.0010}_{-0.00095} \quad (+0.0\sigma)$	$z_{\text{eq}}$	$3314^{+100}_{-98} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.044^{+0.080}_{-0.084} \quad (-0.0\sigma)$	$\sigma_8$	$0.800^{+0.035}_{-0.036} \quad (-0.0\sigma)$	$100\theta_{\text{eq}}$	$0.831^{+0.020}_{-0.020} \quad (+0.1\sigma)$
$n_s$	$0.978^{+0.014}_{-0.014} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.432^{+0.033}_{-0.032} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0728^{+0.0017}_{-0.0016} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$0.99996^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.588^{+0.034}_{-0.034} \quad (-0.1\sigma)$	$H(0.57)$	$93.8^{+1.1}_{-1.0} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$234^{+40}_{-50} \quad (-0.5\sigma)$	$\sigma_8/h^{0.5}$	$0.962^{+0.050}_{-0.050} \quad (-0.1\sigma)$	$D_A(0.57)$	$1366^{+29}_{-29} \quad (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$33^{+20}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.64^{+0.14}_{-0.15} \quad (-0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.6707^{+0.0072}_{-0.0069} \quad (-0.1\sigma)$
$A_{217}^{\text{PS}}$	$102^{+30}_{-30} \quad (+0.3\sigma)$	$z_{\text{re}}$	$8.0^{+3.9}_{-4.4} \quad (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.460^{+0.024}_{-0.024} \quad (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$42^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.10^{+0.17}_{-0.17} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.601^{+0.025}_{-0.025} \quad (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 7.20 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.861^{+0.028}_{-0.028} \quad (-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24643^{+0.00023}_{-0.00023} \quad (-3.3\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.53^{+0.25}_{-0.24}$	$D_{40}$	$1203^{+34}_{-34} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$25^{+6}_{-6} \quad (-0.5\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5721^{+81}_{-83} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$103.6^{+4.4}_{-4.5} \quad (+0.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2523^{+28}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$28^{+5}_{-5} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{1420}$	$814^{+10}_{-9.8} \quad (-0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10494.2 \quad (\nu: 1.2) \quad (-0.3\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$n_{\text{s},0.002}$	$0.978^{+0.014}_{-0.014} \quad (+0.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$8057.8 \quad (\nu: 15.8)$
$A_{217}^{\text{dust}}$	$1.24^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.24511^{+0.00023}_{-0.00023} \quad (-3.4\sigma)$	$\chi_{\text{H070p6}}^2$	$0.28 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.96^{+0.36}_{-0.35}$	$\text{Age}/\text{Gyr}$	$13.731^{+0.092}_{-0.092} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.5 \quad (\nu: 6.1) \quad (+0.4\sigma)$
$c_{100}$	$0.9969^{+0.0019}_{-0.0019} \quad (-1.3\sigma)$	$z_*$	$1089.17^{+0.99}_{-0.96} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18552.0 \quad (\nu: 16.2) \quad (+1293.1\sigma)$
$c_{217}$	$0.9967^{+0.0036}_{-0.0035} \quad (+0.8\sigma)$	$r_*$	$145.24^{+0.96}_{-0.96} \quad (+0.1\sigma)$		
$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$100\theta_*$	$1.04164^{+0.00097}_{-0.00098} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18560.75; \Delta\bar{\chi}_{\text{eff}}^2 = 7283.36; R - 1 = 0.00876$$

### 3.15 base\_Alens\_CamSpecHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02266^{+0.00058}_{-0.00055} \quad (+0.1\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$r_*$	$145.2^{+1.0}_{-1.0} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1162^{+0.0049}_{-0.0047} \quad (-0.1\sigma)$	$H_0$	$69.1^{+2.3}_{-2.3} \quad (+0.1\sigma)$	$100\theta_*$	$1.04161^{+0.00099}_{-0.0010} \quad (+0.1\sigma)$
$100\theta_{MC}$	$1.0414^{+0.0010}_{-0.0010} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.708^{+0.028}_{-0.030} \quad (+0.1\sigma)$	$z_{drag}$	$1060.3^{+1.1}_{-1.1} \quad (+0.1\sigma)$
$\tau$	$< 0.0966 \quad (+0.0\sigma)$	$\Omega_m$	$0.292^{+0.030}_{-0.028} \quad (-0.1\sigma)$	$r_{drag}$	$147.79^{+0.97}_{-0.97} \quad (+0.1\sigma)$
$A_L$	$1.22^{+0.20}_{-0.18} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1395^{+0.0045}_{-0.0043} \quad (-0.1\sigma)$	$k_D$	$0.1404^{+0.0010}_{-0.00099} \quad (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.060^{+0.062}_{-0.056} \quad (-0.1\sigma)$	$\Omega_m h^3$	$0.0964^{+0.0010}_{-0.00097} \quad (+0.0\sigma)$	$100\theta_D$	$0.16056^{+0.00059}_{-0.00058} \quad (-0.1\sigma)$
$n_s$	$0.977^{+0.014}_{-0.014} \quad (+0.4\sigma)$	$\sigma_8$	$0.807^{+0.030}_{-0.029} \quad (-0.1\sigma)$	$z_{eq}$	$3319^{+110}_{-100} \quad (-0.1\sigma)$
$y_{cal}$	$1.0000^{+0.0049}_{-0.0048} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.437^{+0.034}_{-0.031} \quad (-0.1\sigma)$	$100\theta_{eq}$	$0.830^{+0.021}_{-0.021} \quad (+0.1\sigma)$
$A_{100}^{PS}$	$234^{+40}_{-50} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.594^{+0.032}_{-0.030} \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.0727^{+0.0018}_{-0.0017} \quad (+0.1\sigma)$
$A_{143}^{PS}$	$33^{+20}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.971^{+0.047}_{-0.046} \quad (-0.1\sigma)$	$H(0.57)$	$93.7^{+1.1}_{-1.1} \quad (+0.1\sigma)$
$A_{217}^{PS}$	$101^{+30}_{-30} \quad (+0.3\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.64^{+0.14}_{-0.15} \quad (-0.0\sigma)$	$D_A(0.57)$	$1367^{+31}_{-31} \quad (-0.1\sigma)$
$A_{217}^{CIB}$	$42^{+10}_{-10} \quad (-2.8\sigma)$	$z_{re}$	$< 11.3 \quad (+0.0\sigma)$	$F_{AP}(0.57)$	$0.6711^{+0.0078}_{-0.0073} \quad (-0.1\sigma)$
$A_{143}^{tSZ}$	$< 7.18 \quad (-1.0\sigma)$	$10^9 A_s$	$2.13^{+0.13}_{-0.12} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.464^{+0.023}_{-0.022} \quad (-0.1\sigma)$
$r_{143 \times 217}^{PS}$	$0.53^{+0.25}_{-0.24}$	$10^9 A_s e^{-2\tau}$	$1.862^{+0.028}_{-0.028} \quad (-0.4\sigma)$	$\sigma_8(0.57)$	$0.605^{+0.020}_{-0.018} \quad (-0.0\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{40}$	$1206^{+36}_{-34} \quad (-0.5\sigma)$	$Y_P^{BBN}$	$0.24642^{+0.00024}_{-0.00024} \quad (-3.2\sigma)$
$A^{kSZ}$	—	$D_{220}$	$5719^{+83}_{-83} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$25^{+6}_{-6} \quad (-0.5\sigma)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$D_{810}$	$2523^{+28}_{-28} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$103.7^{+4.5}_{-4.5} \quad (+0.1\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	$814^{+10}_{-9.7} \quad (+0.0\sigma)$	$f_{2000}^{143 \times 217}$	$29^{+5}_{-5} \quad (-0.4\sigma)$
$A_{217}^{dust}$	$1.23^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.977^{+0.014}_{-0.014} \quad (+0.4\sigma)$	$\chi_{lowTEB}^2$	$10494.0 \quad (\nu: 1.2) \quad (-0.3\sigma)$
$A_{143 \times 217}^{dust}$	$0.96^{+0.36}_{-0.35}$	$Y_P$	$0.24510^{+0.00024}_{-0.00024} \quad (-3.2\sigma)$	$\chi_{CamSpec}^2$	$8057.7 \quad (\nu: 16.0)$
$c_{100}$	$0.9969^{+0.0019}_{-0.0019} \quad (-1.3\sigma)$	Age/Gyr	$13.736^{+0.096}_{-0.098} \quad (-0.1\sigma)$	$\chi_{prior}^2$	$8.5 \quad (\nu: 6.2) \quad (+0.4\sigma)$
$c_{217}$	$0.9967^{+0.0036}_{-0.0035} \quad (+0.8\sigma)$	$z_*$	$1089.2^{+1.0}_{-1.0} \quad (-0.2\sigma)$	$\chi_{CMB}^2$	$18551.7 \quad (\nu: 16.3) \quad (+1284.7\sigma)$

$$\bar{\chi}_{eff}^2 = 18560.21; \Delta\bar{\chi}_{eff}^2 = 7283.26; R - 1 = 0.01476$$

### 3.16 base\_Alens\_CamSpecHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022504	$0.02252^{+0.00035}_{-0.00035}$ (+0.7 $\sigma$ )	$\mathcal{C}_{EE}$	1.0003	$1.0001^{+0.0083}_{-0.0084}$	$r_*$	144.87	$144.87^{+0.64}_{-0.65}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	0.11793	$0.1179^{+0.0031}_{-0.0030}$ (-0.4 $\sigma$ )	$\beta_1^1$	-0.04	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	1.04114	$1.04115^{+0.00061}_{-0.00061}$ (+0.1 $\sigma$ )
$100\theta_{MC}$	1.04096	$1.04097^{+0.00063}_{-0.00063}$ (+0.1 $\sigma$ )	$H_0$	68.21	$68.2^{+1.4}_{-1.4}$ (+0.4 $\sigma$ )	$z_{drag}$	1060.09	$1060.11^{+0.71}_{-0.71}$ (+0.6 $\sigma$ )
$\tau$	0.0597	$0.058^{+0.040}_{-0.040}$ (+0.1 $\sigma$ )	$\Omega_\Lambda$	0.6968	$0.697^{+0.018}_{-0.019}$ (+0.4 $\sigma$ )	$r_{drag}$	147.49	$147.49^{+0.62}_{-0.64}$ (+0.1 $\sigma$ )
$A_L$	1.135	$1.14^{+0.16}_{-0.15}$ (-0.2 $\sigma$ )	$\Omega_m$	0.3032	$0.303^{+0.019}_{-0.018}$ (-0.4 $\sigma$ )	$k_D$	0.14056	$0.14057^{+0.00068}_{-0.00066}$ (+0.2 $\sigma$ )
$\ln(10^{10} A_s)$	3.047	$3.044^{+0.080}_{-0.080}$ (-0.0 $\sigma$ )	$\Omega_m h^2$	0.14108	$0.1410^{+0.0029}_{-0.0028}$ (-0.3 $\sigma$ )	$100\theta_D$	0.160630	$0.16062^{+0.00040}_{-0.00039}$ (-0.8 $\sigma$ )
$n_s$	0.9713	$0.971^{+0.010}_{-0.0099}$ (+0.7 $\sigma$ )	$\Omega_m h^3$	0.09623	$0.09625^{+0.00062}_{-0.00060}$ (+0.4 $\sigma$ )	$z_{eq}$	3356	$3355^{+68}_{-66}$ (-0.3 $\sigma$ )
$y_{cal}$	0.999997	$0.99997^{+0.0048}_{-0.0049}$ (-0.1 $\sigma$ )	$\sigma_8$	0.8069	$0.806^{+0.034}_{-0.033}$ (-0.1 $\sigma$ )	$100\theta_{eq}$	0.8221	$0.822^{+0.013}_{-0.013}$ (+0.4 $\sigma$ )
$A_{100}^{PS}$	238.4	$238^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4443	$0.443^{+0.026}_{-0.025}$ (-0.3 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07202	$0.0720^{+0.0011}_{-0.0010}$ (+0.4 $\sigma$ )
$A_{143}^{PS}$	33.3	$36^{+10}_{-10}$ (-0.7 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.5988	$0.598^{+0.029}_{-0.028}$ (-0.2 $\sigma$ )	$H(0.57)$	93.29	$93.32^{+0.64}_{-0.62}$ (+0.5 $\sigma$ )
$A_{217}^{PS}$	100.9	$101^{+30}_{-30}$ (+0.2 $\sigma$ )	$\sigma_8/h^{0.5}$	0.9770	$0.975^{+0.045}_{-0.043}$ (-0.2 $\sigma$ )	$D_A(0.57)$	1379.4	$1379^{+19}_{-19}$ (-0.5 $\sigma$ )
$A_{217}^{CIB}$	46.1	$44^{+10}_{-10}$ (-2.8 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.572	$2.57^{+0.11}_{-0.12}$ (-0.5 $\sigma$ )	$F_{AP}(0.57)$	0.67392	$0.6738^{+0.0048}_{-0.0046}$ (-0.4 $\sigma$ )
$A_{143}^{tSZ}$	4.85	< 7.08 (-1.0 $\sigma$ )	$z_{re}$	8.16	$7.9^{+4.0}_{-4.3}$ (+0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4670	$0.466^{+0.021}_{-0.021}$ (-0.2 $\sigma$ )
$r_{143 \times 217}^{PS}$	0.465	$0.53^{+0.23}_{-0.22}$	$10^9 A_s$	2.106	$2.10^{+0.17}_{-0.17}$ (-0.0 $\sigma$ )	$\sigma_8(0.57)$	0.6023	$0.601^{+0.025}_{-0.024}$ (-0.0 $\sigma$ )
$\xi^{tSZ \times CIB}$	0.01	—	$10^9 A_s e^{-2\tau}$	1.8689	$1.868^{+0.024}_{-0.023}$ (-0.7 $\sigma$ )	$Y_P^{BBN}$	0.246362	$0.24636^{+0.00015}_{-0.00015}$ (-4.7 $\sigma$ )
$A^{kSZ}$	2.1	—	$D_{40}$	1214.8	$1215^{+29}_{-29}$ (-0.7 $\sigma$ )	$f_{2000}^{143}$	26.8	$27^{+5}_{-6}$ (-0.4 $\sigma$ )
$A_{100}^{dust}$	0.979	$0.99^{+0.38}_{-0.38}$	$D_{220}$	5718	$5718^{+76}_{-75}$ (-0.5 $\sigma$ )	$f_{2000}^{217}$	104.76	$104.7^{+3.9}_{-3.9}$ (+0.1 $\sigma$ )
$A_{143}^{dust}$	1.002	$1.02^{+0.36}_{-0.36}$	$D_{810}$	2526.2	$2526^{+26}_{-27}$ (-0.4 $\sigma$ )	$f_{2000}^{143 \times 217}$	29.82	$30^{+4}_{-4}$ (-0.5 $\sigma$ )
$A_{217}^{dust}$	1.214	$1.23^{+0.23}_{-0.23}$	$D_{1420}$	814.1	$814.0^{+9.2}_{-9.3}$ (+0.1 $\sigma$ )	$\chi_{lowTEB}^2$	10494.01	$10495.0 (\nu: 1.2)$ (-0.5 $\sigma$ )
$A_{143 \times 217}^{dust}$	0.966	$0.97^{+0.35}_{-0.35}$	$n_{s,0.002}$	0.9713	$0.971^{+0.010}_{-0.0099}$ (+0.7 $\sigma$ )	$\chi_{CamSpec}^2$	12935.0	$12951.6 (\nu: 17.4)$
$c_{100}$	0.99684	$0.9968^{+0.0019}_{-0.0019}$ (-1.8 $\sigma$ )	$Y_P$	0.245032	$0.24504^{+0.00015}_{-0.00015}$ (-4.7 $\sigma$ )	$\chi_{prior}^2$	3.1	$8.7 (\nu: 6.1)$ (-1.9 $\sigma$ )
$c_{217}$	0.99681	$0.9968^{+0.0035}_{-0.0035}$ (+0.8 $\sigma$ )	Age/Gyr	13.774	$13.772^{+0.057}_{-0.057}$ (-0.5 $\sigma$ )	$\chi_{CMB}^2$	23429.1	$23446.7 (\nu: 17.9)$ (+1558.5 $\sigma$ )
$c_{TE}$	1.0016	$1.0017^{+0.0093}_{-0.0090}$	$z_*$	1089.55	$1089.54^{+0.65}_{-0.63}$ (-0.7 $\sigma$ )			

Best-fit  $\chi_{eff}^2 = 23432.12$ ;  $\Delta\chi_{eff}^2 = 10501.56$ ;  $\bar{\chi}_{eff}^2 = 23455.40$ ;  $\Delta\bar{\chi}_{eff}^2 = 10491.60$ ;  $R - 1 = 0.01013$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.01 ( $\Delta$  -0.57) CamSpec like\_v9.10CMH\_unified: 12935.05

### 3.17 base\_Alens\_CamSpecHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02249^{+0.00031}_{-0.00031} \quad (+0.6\sigma)$	$H_0$	$68.07^{+0.98}_{-0.99} \quad (+0.4\sigma)$	$k_D$	$0.14061^{+0.00062}_{-0.00061} \quad (+0.4\sigma)$
$\Omega_c h^2$	$0.1182^{+0.0022}_{-0.0021} \quad (-0.3\sigma)$	$\Omega_\Lambda$	$0.695^{+0.013}_{-0.013} \quad (+0.3\sigma)$	$100\theta_D$	$0.16064^{+0.00037}_{-0.00037} \quad (-0.7\sigma)$
$100\theta_{MC}$	$1.04093^{+0.00057}_{-0.00057} \quad (+0.0\sigma)$	$\Omega_m$	$0.305^{+0.013}_{-0.013} \quad (-0.3\sigma)$	$z_{eq}$	$3363^{+49}_{-47} \quad (-0.2\sigma)$
$\tau$	$0.058^{+0.040}_{-0.040} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1414^{+0.0020}_{-0.0020} \quad (-0.2\sigma)$	$100\theta_{eq}$	$0.8207^{+0.0092}_{-0.0093} \quad (+0.2\sigma)$
$A_L$	$1.13^{+0.15}_{-0.15} \quad (-0.3\sigma)$	$\Omega_m h^3$	$0.09623^{+0.00061}_{-0.00059} \quad (+0.4\sigma)$	$r_{drag}/D_V(0.57)$	$0.07191^{+0.00073}_{-0.00074} \quad (+0.3\sigma)$
$\ln(10^{10} A_s)$	$3.044^{+0.080}_{-0.080} \quad (-0.0\sigma)$	$\sigma_8$	$0.807^{+0.034}_{-0.032} \quad (-0.1\sigma)$	$H(0.57)$	$93.24^{+0.46}_{-0.45} \quad (+0.4\sigma)$
$n_s$	$0.9705^{+0.0082}_{-0.0081} \quad (+0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.022}_{-0.021} \quad (-0.2\sigma)$	$D_A(0.57)$	$1381^{+13}_{-13} \quad (-0.4\sigma)$
$y_{cal}$	$0.99996^{+0.0048}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.027}_{-0.026} \quad (-0.1\sigma)$	$F_{AP}(0.57)$	$0.6744^{+0.0034}_{-0.0032} \quad (-0.3\sigma)$
$A_{100}^{PS}$	$239^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.978^{+0.043}_{-0.041} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.467^{+0.021}_{-0.020} \quad (-0.1\sigma)$
$A_{143}^{PS}$	$36^{+10}_{-10} \quad (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.57^{+0.11}_{-0.12} \quad (-0.6\sigma)$	$\sigma_8(0.57)$	$0.602^{+0.025}_{-0.024} \quad (-0.0\sigma)$
$A_{217}^{PS}$	$101^{+20}_{-30} \quad (+0.2\sigma)$	$z_{re}$	$7.9^{+4.0}_{-4.3} \quad (+0.0\sigma)$	$Y_P^{BBN}$	$0.24635^{+0.00013}_{-0.00013} \quad (-5.6\sigma)$
$A_{217}^{CIB}$	$44^{+10}_{-10} \quad (-2.9\sigma)$	$10^9 A_s$	$2.10^{+0.17}_{-0.17} \quad (-0.0\sigma)$	$f_{2000}^{143}$	$27^{+5}_{-5} \quad (-0.4\sigma)$
$A_{143}^{tSZ}$	$< 7.08 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.022}_{-0.022} \quad (-0.6\sigma)$	$f_{2000}^{217}$	$104.9^{+3.8}_{-3.7} \quad (+0.1\sigma)$
$r_{143 \times 217}^{PS}$	$0.53^{+0.23}_{-0.22}$	$D_{40}$	$1217^{+27}_{-26} \quad (-0.7\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+4}_{-4} \quad (-0.5\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{220}$	$5716^{+76}_{-75} \quad (-0.5\sigma)$	$\chi_{lowTEB}^2$	$10495.2 \quad (\nu: 1.1) \quad (-0.5\sigma)$
$A^{kSZ}$	—	$D_{810}$	$2526^{+26}_{-27} \quad (-0.3\sigma)$	$\chi_{CamSpec}^2$	$12951.0 \quad (\nu: 16.4)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$D_{1420}$	$813.9^{+9.1}_{-9.3} \quad (+0.1\sigma)$	$\chi_{6DF}^2$	$0.032 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$n_{s,0.002}$	$0.9705^{+0.0082}_{-0.0081} \quad (+0.7\sigma)$	$\chi_{MGS}^2$	$1.68 \quad (\nu: 0.1) \quad (+0.3\sigma)$
$A_{217}^{dust}$	$1.22^{+0.22}_{-0.22}$	$Y_P$	$0.24502^{+0.00013}_{-0.00013} \quad (-5.7\sigma)$	$\chi_{DR11CMass}^2$	$2.79 \quad (\nu: 0.1) \quad (+0.1\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$Age/Gyr$	$13.778^{+0.045}_{-0.045} \quad (-0.5\sigma)$	$\chi_{DR11LOWZ}^2$	$0.42 \quad (\nu: 0.1) \quad (-0.3\sigma)$
$c_{100}$	$0.9968^{+0.0018}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.61^{+0.50}_{-0.49} \quad (-0.6\sigma)$	$\chi_{prior}^2$	$8.8 \quad (\nu: 6.2) \quad (-1.9\sigma)$
$c_{217}$	$0.9968^{+0.0035}_{-0.0035} \quad (+0.8\sigma)$	$r_*$	$144.80^{+0.49}_{-0.50} \quad (+0.0\sigma)$	$\chi_{CMB}^2$	$23446.2 \quad (\nu: 17.1) \quad (+1568.5\sigma)$
$c_{TE}$	$1.0019^{+0.0094}_{-0.0090}$	$100\theta_*$	$1.04111^{+0.00056}_{-0.00057} \quad (+0.0\sigma)$	$\chi_{BAO}^2$	$4.93 \quad (\nu: 0.3) \quad (+0.1\sigma)$
$c_{EE}$	$1.0001^{+0.0084}_{-0.0085}$	$z_{drag}$	$1060.06^{+0.68}_{-0.62} \quad (+0.6\sigma)$		
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_{drag}$	$147.43^{+0.50}_{-0.51} \quad (-0.1\sigma)$		

$$\bar{\chi}_{eff}^2 = 23459.87; \Delta\bar{\chi}_{eff}^2 = 10491.64; R - 1 = 0.00987$$

### 3.18 base\_Alens\_CamSpecHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02253^{+0.00035}_{-0.00035} \quad (+0.7\sigma)$	$c_{EE}$	$1.0001^{+0.0084}_{-0.0084}$	$r_*$	$144.89^{+0.62}_{-0.63} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1178^{+0.0029}_{-0.0029} \quad (-0.4\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.04116^{+0.00061}_{-0.00061} \quad (+0.1\sigma)$
$100\theta_{MC}$	$1.04098^{+0.00063}_{-0.00062} \quad (+0.1\sigma)$	$H_0$	$68.3^{+1.4}_{-1.3} \quad (+0.4\sigma)$	$z_{drag}$	$1060.12^{+0.70}_{-0.68} \quad (+0.6\sigma)$
$\tau$	$0.058^{+0.040}_{-0.040} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.698^{+0.017}_{-0.018} \quad (+0.4\sigma)$	$r_{drag}$	$147.51^{+0.61}_{-0.62} \quad (+0.1\sigma)$
$A_L$	$1.14^{+0.16}_{-0.15} \quad (-0.2\sigma)$	$\Omega_m$	$0.302^{+0.018}_{-0.017} \quad (-0.4\sigma)$	$k_D$	$0.14056^{+0.00066}_{-0.00065} \quad (+0.2\sigma)$
$\ln(10^{10} A_s)$	$3.044^{+0.080}_{-0.080} \quad (-0.0\sigma)$	$\Omega_m h^2$	$0.1409^{+0.0027}_{-0.0027} \quad (-0.3\sigma)$	$100\theta_D$	$0.16061^{+0.00039}_{-0.00039} \quad (-0.8\sigma)$
$n_s$	$0.9717^{+0.0097}_{-0.0095} \quad (+0.7\sigma)$	$\Omega_m h^3$	$0.09625^{+0.00061}_{-0.00060} \quad (+0.4\sigma)$	$z_{eq}$	$3353^{+65}_{-64} \quad (-0.3\sigma)$
$y_{cal}$	$0.99996^{+0.0048}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8$	$0.805^{+0.034}_{-0.033} \quad (-0.1\sigma)$	$100\theta_{eq}$	$0.823^{+0.013}_{-0.013} \quad (+0.3\sigma)$
$A_{100}^{PS}$	$238^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.443^{+0.025}_{-0.024} \quad (-0.3\sigma)$	$r_{drag}/D_V(0.57)$	$0.0721^{+0.0010}_{-0.0010} \quad (+0.4\sigma)$
$A_{143}^{PS}$	$36^{+10}_{-10} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.597^{+0.029}_{-0.028} \quad (-0.2\sigma)$	$H(0.57)$	$93.34^{+0.62}_{-0.60} \quad (+0.5\sigma)$
$A_{217}^{PS}$	$101^{+20}_{-30} \quad (+0.2\sigma)$	$\sigma_8/h^{0.5}$	$0.974^{+0.045}_{-0.043} \quad (-0.2\sigma)$	$D_A(0.57)$	$1378^{+18}_{-18} \quad (-0.4\sigma)$
$A_{217}^{CIB}$	$44^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.57^{+0.11}_{-0.12} \quad (-0.5\sigma)$	$F_{AP}(0.57)$	$0.6737^{+0.0046}_{-0.0045} \quad (-0.4\sigma)$
$A_{143}^{tSZ}$	$< 7.14 \quad (-1.0\sigma)$	$z_{re}$	$7.9^{+4.0}_{-4.3} \quad (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.466^{+0.021}_{-0.021} \quad (-0.2\sigma)$
$r_{143 \times 217}^{PS}$	$0.53^{+0.23}_{-0.22}$	$10^9 A_s$	$2.10^{+0.17}_{-0.17} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.601^{+0.025}_{-0.024} \quad (-0.0\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.868^{+0.023}_{-0.023} \quad (-0.6\sigma)$	$Y_P^{BBN}$	$0.24637^{+0.00015}_{-0.00015} \quad (-4.8\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1215^{+28}_{-28} \quad (-0.7\sigma)$	$f_{2000}^{143}$	$27^{+5}_{-6} \quad (-0.4\sigma)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$D_{220}$	$5718^{+76}_{-75} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$104.7^{+3.9}_{-3.9} \quad (+0.1\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2526^{+27}_{-27} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+4}_{-4} \quad (-0.5\sigma)$
$A_{217}^{dust}$	$1.23^{+0.22}_{-0.22}$	$D_{1420}$	$814.0^{+9.3}_{-9.3} \quad (+0.1\sigma)$	$\chi_{lowTEB}^2$	$10495.0 \quad (\nu: 1.1) \quad (-0.5\sigma)$
$A_{143 \times 217}^{dust}$	$0.97^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.9717^{+0.0097}_{-0.0095} \quad (+0.7\sigma)$	$\chi_{CamSpec}^2$	$12951.6 \quad (\nu: 17.3)$
$c_{100}$	$0.9968^{+0.0018}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.24504^{+0.00015}_{-0.00015} \quad (-4.8\sigma)$	$\chi_{JLA}^2$	$706.62 \quad (\nu: 0.0) \quad (-0.3\sigma)$
$c_{217}$	$0.9968^{+0.0035}_{-0.0035} \quad (+0.8\sigma)$	$Age/Gyr$	$13.770^{+0.055}_{-0.056} \quad (-0.5\sigma)$	$\chi_{prior}^2$	$8.8 \quad (\nu: 6.1) \quad (-1.9\sigma)$
$c_{TE}$	$1.0017^{+0.0095}_{-0.0090}$	$z_*$	$1089.52^{+0.62}_{-0.62} \quad (-0.6\sigma)$	$\chi_{CMB}^2$	$23446.6 \quad (\nu: 17.6) \quad (+1558.5\sigma)$

$$\bar{\chi}_{eff}^2 = 24161.96; \Delta\bar{\chi}_{eff}^2 = 10491.52; R - 1 = 0.01052$$

### 3.19 base\_Alens\_CamSpecHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02254^{+0.00035}_{-0.00035} \quad (+0.7\sigma)$	$c_{EE}$	$1.0001^{+0.0084}_{-0.0085}$	$r_*$	$144.91^{+0.63}_{-0.64} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1177^{+0.0030}_{-0.0030} \quad (-0.4\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.04118^{+0.00062}_{-0.00061} \quad (+0.1\sigma)$
$100\theta_{MC}$	$1.04100^{+0.00062}_{-0.00063} \quad (+0.1\sigma)$	$H_0$	$68.3^{+1.4}_{-1.4} \quad (+0.4\sigma)$	$z_{drag}$	$1060.14^{+0.71}_{-0.69} \quad (+0.6\sigma)$
$\tau$	$0.059^{+0.040}_{-0.040} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.698^{+0.018}_{-0.018} \quad (+0.4\sigma)$	$r_{drag}$	$147.53^{+0.61}_{-0.63} \quad (+0.1\sigma)$
$A_L$	$1.15^{+0.16}_{-0.15} \quad (-0.2\sigma)$	$\Omega_m$	$0.302^{+0.018}_{-0.018} \quad (-0.4\sigma)$	$k_D$	$0.14055^{+0.00066}_{-0.00066} \quad (+0.2\sigma)$
$\ln(10^{10} A_s)$	$3.044^{+0.080}_{-0.080} \quad (-0.0\sigma)$	$\Omega_m h^2$	$0.1408^{+0.0028}_{-0.0028} \quad (-0.3\sigma)$	$100\theta_D$	$0.16060^{+0.00039}_{-0.00039} \quad (-0.8\sigma)$
$n_s$	$0.9720^{+0.0098}_{-0.0097} \quad (+0.7\sigma)$	$\Omega_m h^3$	$0.09626^{+0.00061}_{-0.00060} \quad (+0.4\sigma)$	$z_{eq}$	$3350^{+67}_{-66} \quad (-0.3\sigma)$
$y_{cal}$	$0.99997^{+0.0048}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8$	$0.805^{+0.034}_{-0.033} \quad (-0.1\sigma)$	$100\theta_{eq}$	$0.823^{+0.013}_{-0.013} \quad (+0.3\sigma)$
$A_{100}^{PS}$	$238^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.442^{+0.026}_{-0.025} \quad (-0.3\sigma)$	$r_{drag}/D_V(0.57)$	$0.0721^{+0.0011}_{-0.0010} \quad (+0.4\sigma)$
$A_{143}^{PS}$	$36^{+10}_{-10} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.597^{+0.029}_{-0.028} \quad (-0.2\sigma)$	$H(0.57)$	$93.36^{+0.64}_{-0.61} \quad (+0.5\sigma)$
$A_{217}^{PS}$	$101^{+20}_{-30} \quad (+0.2\sigma)$	$\sigma_8/h^{0.5}$	$0.974^{+0.045}_{-0.043} \quad (-0.2\sigma)$	$D_A(0.57)$	$1378^{+18}_{-18} \quad (-0.4\sigma)$
$A_{217}^{CIB}$	$44^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.57^{+0.11}_{-0.12} \quad (-0.5\sigma)$	$F_{AP}(0.57)$	$0.6735^{+0.0047}_{-0.0046} \quad (-0.4\sigma)$
$A_{143}^{tSZ}$	$< 7.14 \quad (-1.0\sigma)$	$z_{re}$	$7.9^{+4.0}_{-4.3} \quad (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.465^{+0.021}_{-0.021} \quad (-0.2\sigma)$
$r_{143 \times 217}^{PS}$	$0.53^{+0.23}_{-0.22}$	$10^9 A_s$	$2.10^{+0.17}_{-0.17} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.601^{+0.025}_{-0.024} \quad (-0.0\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.868^{+0.023}_{-0.023} \quad (-0.6\sigma)$	$Y_P^{BBN}$	$0.24637^{+0.00015}_{-0.00015} \quad (-4.8\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1214^{+29}_{-29} \quad (-0.7\sigma)$	$f_{2000}^{143}$	$26^{+5}_{-6} \quad (-0.4\sigma)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$D_{220}$	$5719^{+76}_{-75} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$104.6^{+3.9}_{-3.9} \quad (+0.1\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2525^{+27}_{-27} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+4}_{-4} \quad (-0.5\sigma)$
$A_{217}^{dust}$	$1.23^{+0.23}_{-0.23}$	$D_{1420}$	$814.1^{+9.3}_{-9.4} \quad (+0.1\sigma)$	$\chi_{lowTEB}^2$	$10494.9 \quad (\nu: 1.2) \quad (-0.5\sigma)$
$A_{143 \times 217}^{dust}$	$0.97^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.9720^{+0.0098}_{-0.0097} \quad (+0.7\sigma)$	$\chi_{CamSpec}^2$	$12951.7 \quad (\nu: 17.5)$
$c_{100}$	$0.9968^{+0.0018}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.24505^{+0.00015}_{-0.00015} \quad (-4.8\sigma)$	$\chi_{H070p6}^2$	$0.51 \quad (\nu: 0.0) \quad (-0.4\sigma)$
$c_{217}$	$0.9968^{+0.0035}_{-0.0035} \quad (+0.8\sigma)$	$Age/Gyr$	$13.768^{+0.056}_{-0.056} \quad (-0.5\sigma)$	$\chi_{prior}^2$	$8.8 \quad (\nu: 6.1) \quad (-1.9\sigma)$
$c_{TE}$	$1.0016^{+0.0094}_{-0.0090}$	$z_*$	$1089.49^{+0.63}_{-0.62} \quad (-0.6\sigma)$	$\chi_{CMB}^2$	$23446.6 \quad (\nu: 17.8) \quad (+1559.3\sigma)$

$$\bar{\chi}_{eff}^2 = 23455.91; \Delta\bar{\chi}_{eff}^2 = 10491.49; R - 1 = 0.01072$$

### 3.20 base\_Alens\_CamSpecHM\_TTTEEE\_lowTEB\_post\_lensing\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00028}_{-0.00029}$	$\Omega_\Lambda$	$0.694^{+0.012}_{-0.012}$	$z_{\text{eq}}$	$3362^{+46}_{-47}$
$\Omega_c h^2$	$0.1183^{+0.0020}_{-0.0020}$	$\Omega_m$	$0.306^{+0.012}_{-0.012}$	$100\theta_{\text{eq}}$	$0.8207^{+0.0089}_{-0.0086}$
$100\theta_{\text{MC}}$	$1.04095^{+0.00055}_{-0.00062}$	$\Omega_m h^2$	$0.1413^{+0.0019}_{-0.0020}$	$r_{\text{drag}}/D_V(0.57)$	$0.07189^{+0.00070}_{-0.00069}$
$\tau$	$0.058^{+0.039}_{-0.039}$	$\Omega_m h^3$	$0.09609^{+0.00052}_{-0.00058}$	$H(0.57)$	$93.17^{+0.44}_{-0.43}$
$A_L$	$1.03^{+0.11}_{-0.091}$	$\sigma_8$	$0.806^{+0.032}_{-0.033}$	$D_A(0.57)$	$1382^{+12}_{-13}$
$\ln(10^{10} A_s)$	$3.043^{+0.078}_{-0.078}$	$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.021}_{-0.020}$	$F_{\text{AP}}(0.57)$	$0.6746^{+0.0031}_{-0.0031}$
$n_s$	$0.9698^{+0.0071}_{-0.0073}$	$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.026}_{-0.025}$	$f\sigma_8(0.57)$	$0.467^{+0.019}_{-0.020}$
$y_{\text{cal}}$	$1.0000^{+0.0051}_{-0.0051}$	$\sigma_8/h^{0.5}$	$0.978^{+0.041}_{-0.041}$	$\sigma_8(0.57)$	$0.601^{+0.023}_{-0.023}$
$A_{100}^{\text{PS}}$	$244^{+40}_{-50}$	$\langle d^2 \rangle^{1/2}$	$2.453^{+0.055}_{-0.052}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24631^{+0.00011}_{-0.00013}$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10}$	$z_{\text{re}}$	$7.9^{+3.9}_{-4.3}$	$f_{2000}^{143}$	$28^{+5}_{-5}$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30}$	$10^9 A_s$	$2.10^{+0.16}_{-0.17}$	$f_{2000}^{217}$	$106.0^{+3.6}_{-3.4}$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.022}_{-0.022}$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-3}$
$A_{143}^{\text{tSZ}}$	$< 6.82$	$D_{40}$	$1217^{+26}_{-23}$	$\chi^2_{\text{lensing}}$	$10.4 (\nu: 2.1)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.21}_{-0.20}$	$D_{220}$	$5709^{+73}_{-74}$	$\chi^2_{\text{lowTEB}}$	$10495.1 (\nu: 1.0)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2528^{+28}_{-28}$	$\chi^2_{\text{CamSpec}}$	$12953.5 (\nu: 17.0)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$814.8^{+9.9}_{-9.5}$	$\chi^2_{\text{H070p6}}$	$0.64 (\nu: 0.0)$
$A_{100}^{\text{dust}}$	$0.997^{+0.37}_{-0.37}$	$n_{\text{s},0.002}$	$0.9698^{+0.0071}_{-0.0073}$	$\chi^2_{\text{JLA}}$	$706.64 (\nu: 0.0)$
$A_{143}^{\text{dust}}$	$1.03^{+0.37}_{-0.36}$	$Y_{\text{P}}$	$0.24498^{+0.00012}_{-0.00012}$	$\chi^2_{6\text{DF}}$	$0.029 (\nu: 0.0)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.23}$	$\text{Age/Gyr}$	$13.786^{+0.042}_{-0.039}$	$\chi^2_{\text{MGS}}$	$1.65 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.37}_{-0.37}$	$z_*$	$1089.72^{+0.49}_{-0.48}$	$\chi^2_{\text{DR11CMass}}$	$2.74 (\nu: 0.1)$
$c_{100}$	$0.9968^{+0.0018}_{-0.0019}$	$r_*$	$144.86^{+0.48}_{-0.48}$	$\chi^2_{\text{DR11LOWZ}}$	$0.43 (\nu: 0.1)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0034}$	$100\theta_*$	$1.04114^{+0.00055}_{-0.00062}$	$\chi^2_{\text{prior}}$	$9.1 (\nu: 6.9)$
$c_{TE}$	$1.0051^{+0.0092}_{-0.0094}$	$z_{\text{drag}}$	$1059.86^{+0.57}_{-0.60}$	$\chi^2_{\text{CMB}}$	$23459.1 (\nu: 17.4)$
$c_{EE}$	$1.0013^{+0.0086}_{-0.0084}$	$r_{\text{drag}}$	$147.52^{+0.48}_{-0.49}$	$\chi^2_{\text{BAO}}$	$4.85 (\nu: 0.3)$
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$k_{\text{D}}$	$0.14045^{+0.00059}_{-0.00058}$		
$H_0$	$67.99^{+0.93}_{-0.92}$	$100\theta_{\text{D}}$	$0.16076^{+0.00037}_{-0.00036}$		

$$\bar{\chi}^2_{\text{eff}} = 24180.36; R - 1 = 0.07499$$

### 3.21 base\_Alens\_CamSpecHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02252^{+0.00036}_{-0.00036} \quad (+0.7\sigma)$	$c_{EE}$	$1.0002^{+0.0084}_{-0.0085}$	$r_*$	$144.88^{+0.65}_{-0.64} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1178^{+0.0030}_{-0.0030} \quad (-0.4\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.04116^{+0.00062}_{-0.00061} \quad (+0.1\sigma)$
$100\theta_{MC}$	$1.04098^{+0.00063}_{-0.00062} \quad (+0.1\sigma)$	$H_0$	$68.3^{+1.4}_{-1.4} \quad (+0.4\sigma)$	$z_{drag}$	$1060.11^{+0.71}_{-0.66} \quad (+0.6\sigma)$
$\tau$	$< 0.0949 \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.697^{+0.018}_{-0.019} \quad (+0.4\sigma)$	$r_{drag}$	$147.51^{+0.62}_{-0.62} \quad (+0.1\sigma)$
$A_L$	$1.12^{+0.14}_{-0.14} \quad (-0.2\sigma)$	$\Omega_m$	$0.303^{+0.019}_{-0.018} \quad (-0.4\sigma)$	$k_D$	$0.14056^{+0.00065}_{-0.00066} \quad (+0.2\sigma)$
$\ln(10^{10} A_s)$	$3.061^{+0.061}_{-0.053} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1410^{+0.0028}_{-0.0028} \quad (-0.3\sigma)$	$100\theta_D$	$0.16062^{+0.00039}_{-0.00040} \quad (-0.8\sigma)$
$n_s$	$0.972^{+0.010}_{-0.0097} \quad (+0.7\sigma)$	$\Omega_m h^3$	$0.09624^{+0.00061}_{-0.00060} \quad (+0.4\sigma)$	$z_{eq}$	$3354^{+67}_{-67} \quad (-0.3\sigma)$
$y_{cal}$	$0.99997^{+0.0049}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8$	$0.812^{+0.028}_{-0.025} \quad (-0.2\sigma)$	$100\theta_{eq}$	$0.823^{+0.013}_{-0.013} \quad (+0.4\sigma)$
$A_{100}^{PS}$	$238^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.447^{+0.024}_{-0.022} \quad (-0.3\sigma)$	$r_{drag}/D_V(0.57)$	$0.0721^{+0.0011}_{-0.0010} \quad (+0.4\sigma)$
$A_{143}^{PS}$	$36^{+10}_{-20} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.026}_{-0.024} \quad (-0.3\sigma)$	$H(0.57)$	$93.32^{+0.65}_{-0.62} \quad (+0.5\sigma)$
$A_{217}^{PS}$	$101^{+30}_{-30} \quad (+0.2\sigma)$	$\sigma_8/h^{0.5}$	$0.983^{+0.039}_{-0.036} \quad (-0.3\sigma)$	$D_A(0.57)$	$1379^{+19}_{-19} \quad (-0.5\sigma)$
$A_{217}^{CIB}$	$44^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.57^{+0.11}_{-0.12} \quad (-0.5\sigma)$	$F_{AP}(0.57)$	$0.6738^{+0.0047}_{-0.0047} \quad (-0.4\sigma)$
$A_{143}^{tSZ}$	$< 7.11 \quad (-1.0\sigma)$	$z_{re}$	$< 11.3 \quad (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.470^{+0.018}_{-0.017} \quad (-0.2\sigma)$
$r_{143 \times 217}^{PS}$	$0.53^{+0.23}_{-0.22}$	$10^9 A_s$	$2.14^{+0.13}_{-0.11} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.606^{+0.019}_{-0.017} \quad (-0.1\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.868^{+0.024}_{-0.023} \quad (-0.6\sigma)$	$Y_P^{BBN}$	$0.24637^{+0.00015}_{-0.00015} \quad (-4.7\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1217^{+28}_{-28} \quad (-0.7\sigma)$	$f_{2000}^{143}$	$27^{+5}_{-6} \quad (-0.4\sigma)$
$A_{100}^{dust}$	$0.99^{+0.37}_{-0.38}$	$D_{220}$	$5717^{+77}_{-75} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$104.7^{+3.9}_{-3.9} \quad (+0.1\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2526^{+27}_{-27} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+4}_{-4} \quad (-0.5\sigma)$
$A_{217}^{dust}$	$1.23^{+0.22}_{-0.22}$	$D_{1420}$	$814.1^{+9.3}_{-9.5} \quad (+0.1\sigma)$	$\chi_{lowTEB}^2$	$10494.8 \quad (\nu: 1.2) \quad (-0.5\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.972^{+0.010}_{-0.0097} \quad (+0.7\sigma)$	$\chi_{CamSpec}^2$	$12951.6 \quad (\nu: 17.7)$
$c_{100}$	$0.9968^{+0.0018}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.24504^{+0.00015}_{-0.00015} \quad (-4.7\sigma)$	$\chi_{prior}^2$	$8.8 \quad (\nu: 6.2) \quad (-1.9\sigma)$
$c_{217}$	$0.9968^{+0.0035}_{-0.0035} \quad (+0.8\sigma)$	$Age/Gyr$	$13.771^{+0.057}_{-0.058} \quad (-0.5\sigma)$	$\chi_{CMB}^2$	$23446.4 \quad (\nu: 18.0) \quad (+1561.1\sigma)$
$c_{TE}$	$1.0016^{+0.0096}_{-0.0090}$	$z_*$	$1089.53^{+0.65}_{-0.64} \quad (-0.6\sigma)$		

$$\bar{\chi}_{eff}^2 = 23455.19; \Delta\bar{\chi}_{eff}^2 = 10491.64; R - 1 = 0.01100$$



### 3.22 base\_Alens\_plikHM\_TE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02255	$0.02253^{+0.00063}_{-0.00063}$	$\sigma_8$	0.8074	$0.808^{+0.040}_{-0.040}$	$100\theta_*$	1.04127	$1.0413^{+0.0010}_{-0.0010}$
$\Omega_c h^2$	0.11699	$0.1172^{+0.0045}_{-0.0043}$	$\sigma_8 \Omega_m^{0.5}$	0.4404	$0.442^{+0.031}_{-0.030}$	$D_A/\text{Gpc}$	13.933	$13.930^{+0.091}_{-0.092}$
$100\theta_{\text{MC}}$	1.04110	$1.0411^{+0.0011}_{-0.0010}$	$\sigma_8 \Omega_m^{0.25}$	0.5963	$0.597^{+0.034}_{-0.033}$	$z_{\text{drag}}$	1060.12	$1060.1^{+1.3}_{-1.3}$
$\tau$	0.0597	$0.059^{+0.040}_{-0.044}$	$\sigma_8/h^{0.5}$	0.975	$0.976^{+0.052}_{-0.049}$	$r_{\text{drag}}$	147.69	$147.7^{+1.0}_{-0.99}$
$A_L$	1.122	$1.13^{+0.38}_{-0.38}$	$\langle d^2 \rangle^{1/2}$	2.527	$2.53^{+0.40}_{-0.41}$	$k_D$	0.14037	$0.1404^{+0.0012}_{-0.0012}$
$\ln(10^{10} A_s)$	3.049	$3.049^{+0.088}_{-0.091}$	$z_{\text{re}}$	8.13	$8.0^{+3.8}_{-4.5}$	$100\theta_D$	0.16063	$0.16067^{+0.00077}_{-0.00073}$
$n_s$	0.9819	$0.981^{+0.030}_{-0.030}$	$10^9 A_s$	2.109	$2.11^{+0.19}_{-0.19}$	$z_{\text{eq}}$	3335	$3338^{+100}_{-96}$
$y_{\text{cal}}$	0.99975	$1.0001^{+0.0049}_{-0.0050}$	$10^9 A_s e^{-2\tau}$	1.8717	$1.873^{+0.047}_{-0.045}$	$k_{\text{eq}}$	0.010177	$0.01019^{+0.00031}_{-0.00029}$
$A_{100}^{\text{dustTE}}$	0.128	$0.136^{+0.075}_{-0.074}$	$D_{40}$	1193	$1195^{+52}_{-52}$	$100\theta_{\text{eq}}$	0.8262	$0.826^{+0.019}_{-0.019}$
$A_{100 \times 143}^{\text{dustTE}}$	0.133	$0.133^{+0.056}_{-0.057}$	$D_{220}$	5696	$5696^{+120}_{-110}$	$100\theta_{s,\text{eq}}$	0.4560	$0.4557^{+0.0097}_{-0.0097}$
$A_{100 \times 217}^{\text{dustTE}}$	0.310	$0.30^{+0.17}_{-0.16}$	$D_{810}$	2541	$2542^{+68}_{-65}$	$r_{\text{drag}}/D_V(0.57)$	0.07235	$0.0723^{+0.0015}_{-0.0015}$
$A_{143}^{\text{dustTE}}$	0.152	$0.15^{+0.11}_{-0.10}$	$D_{1420}$	823.3	$823^{+31}_{-31}$	$H(0.57)$	93.47	$93.44^{+0.99}_{-0.94}$
$A_{143 \times 217}^{\text{dustTE}}$	0.355	$0.33^{+0.16}_{-0.16}$	$D_{2000}$	234.7	$235^{+14}_{-14}$	$D_A(0.57)$	1373.8	$1375^{+28}_{-27}$
$A_{217}^{\text{dustTE}}$	1.69	$1.65^{+0.51}_{-0.50}$	$n_{s,0.002}$	0.9819	$0.981^{+0.030}_{-0.030}$	$F_{\text{AP}}(0.57)$	0.6725	$0.6728^{+0.0070}_{-0.0065}$
$c_{100}$	0.99952	$0.9993^{+0.0019}_{-0.0020}$	$Y_P$	0.245473	$0.24546^{+0.00027}_{-0.00029}$	$f\sigma_8(0.57)$	0.4658	$0.466^{+0.025}_{-0.024}$
$H_0$	68.64	$68.6^{+2.1}_{-2.1}$	$Y_P^{\text{BBN}}$	0.246800	$0.24679^{+0.00027}_{-0.00029}$	$\sigma_8(0.57)$	0.6040	$0.604^{+0.029}_{-0.030}$
$\Omega_\Lambda$	0.7024	$0.701^{+0.027}_{-0.027}$	$10^5 \text{D}/\text{H}$	2.557	$2.56^{+0.12}_{-0.11}$	$\chi^2_{\text{lowTEB}}$	10492.62	$10494.1 (\nu: 2.0)$
$\Omega_m$	0.2976	$0.299^{+0.027}_{-0.027}$	$\text{Age}/\text{Gyr}$	13.761	$13.763^{+0.091}_{-0.092}$	$\chi^2_{\text{plikTE}}$	932.0	$939.8 (\nu: 9.5)$
$\Omega_m h^2$	0.14019	$0.1403^{+0.0042}_{-0.0040}$	$z_*$	1089.43	$1089.5^{+1.0}_{-1.0}$	$\chi^2_{\text{prior}}$	2.2	$7.9 (\nu: 6.7)$
$\Omega_m h^3$	0.09622	$0.0962^{+0.0011}_{-0.0011}$	$r_*$	145.07	$145.05^{+0.97}_{-0.99}$	$\chi^2_{\text{CMB}}$	11424.6	$11433.9 (\nu: 10.1)$

Best-fit  $\chi^2_{\text{eff}} = 11426.78$ ;  $\bar{\chi}^2_{\text{eff}} = 11441.75$ ;  $R - 1 = 0.00876$

$\chi^2_{\text{eff}}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10492.62 plik\_dx11dr2\_HM\_v18\_TE: 931.99

### 3.23 base\_Alens\_plikHM\_EE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02494	$0.0251^{+0.0028}_{-0.0027}$	$\sigma_8 \Omega_m^{0.5}$	0.393	$0.391^{+0.063}_{-0.061}$	$D_A/\text{Gpc}$	13.957	$13.96^{+0.12}_{-0.12}$
$\Omega_c h^2$	0.1097	$0.1093^{+0.0093}_{-0.0087}$	$\sigma_8 \Omega_m^{0.25}$	0.553	$0.551^{+0.060}_{-0.057}$	$z_{\text{drag}}$	1064.9	$1065.1^{+5.4}_{-5.3}$
$100\theta_{\text{MC}}$	1.04009	$1.0401^{+0.0019}_{-0.0018}$	$\sigma_8/h^{0.5}$	0.912	$0.909^{+0.088}_{-0.085}$	$r_{\text{drag}}$	147.04	$147.0^{+1.6}_{-1.6}$
$\tau$	0.0612	$0.061^{+0.042}_{-0.046}$	$\langle d^2 \rangle^{1/2}$	2.870	$2.87^{+0.46}_{-0.50}$	$k_D$	0.14257	$0.1426^{+0.0028}_{-0.0028}$
$A_L$	1.56	$1.59^{+0.61}_{-0.59}$	$z_{\text{re}}$	7.64	$7.5^{+3.7}_{-4.3}$	$100\theta_D$	0.15787	$0.1579^{+0.0026}_{-0.0025}$
$\ln(10^{10} A_s)$	3.069	$3.069^{+0.090}_{-0.087}$	$10^9 A_s$	2.152	$2.15^{+0.20}_{-0.20}$	$z_{\text{eq}}$	3216	$3212^{+170}_{-160}$
$n_s$	0.9963	$0.999^{+0.030}_{-0.029}$	$10^9 A_s e^{-2\tau}$	1.904	$1.904^{+0.053}_{-0.053}$	$k_{\text{eq}}$	0.00982	$0.00980^{+0.00052}_{-0.00048}$
$y_{\text{cal}}$	0.99996	$1.0000^{+0.0047}_{-0.0050}$	$D_{40}$	1218	$1214^{+56}_{-56}$	$100\theta_{\text{eq}}$	0.8551	$0.857^{+0.039}_{-0.039}$
$A_{100}^{\text{dustEE}}$	0.0823	$0.083^{+0.011}_{-0.012}$	$D_{220}$	6106	$6112^{+430}_{-420}$	$100\theta_{s,\text{eq}}$	0.4690	$0.470^{+0.018}_{-0.019}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0493	$0.050^{+0.010}_{-0.010}$	$D_{810}$	2598	$2600^{+77}_{-80}$	$r_{\text{drag}}/D_V(0.57)$	0.07488	$0.0751^{+0.0038}_{-0.0036}$
$A_{100 \times 217}^{\text{dustEE}}$	0.098	$0.099^{+0.064}_{-0.064}$	$D_{1420}$	848.7	$850^{+36}_{-38}$	$H(0.57)$	96.02	$96.3^{+3.7}_{-3.6}$
$A_{143}^{\text{dustEE}}$	0.1007	$0.101^{+0.014}_{-0.014}$	$D_{2000}$	248.8	$250^{+15}_{-16}$	$D_A(0.57)$	1314	$1310^{+78}_{-76}$
$A_{143 \times 217}^{\text{dustEE}}$	0.222	$0.221^{+0.092}_{-0.092}$	$n_{s,0.002}$	0.9963	$0.999^{+0.030}_{-0.029}$	$F_{\text{AP}}(0.57)$	0.6606	$0.660^{+0.015}_{-0.015}$
$A_{217}^{\text{dustEE}}$	0.636	$0.64^{+0.26}_{-0.25}$	$Y_P$	0.24646	$0.2465^{+0.0010}_{-0.0011}$	$f\sigma_8(0.57)$	0.4365	$0.435^{+0.042}_{-0.042}$
$H_0$	73.0	$73.4^{+6.0}_{-5.7}$	$Y_P^{\text{BBN}}$	0.24779	$0.2478^{+0.0010}_{-0.0011}$	$\sigma_8(0.57)$	0.5949	$0.594^{+0.030}_{-0.030}$
$\Omega_\Lambda$	0.747	$0.747^{+0.052}_{-0.055}$	$10^5 D/H$	2.177	$2.17^{+0.40}_{-0.39}$	$\chi_{\text{lowTEB}}^2$	10493.00	$10494.1 (\nu: 1.5)$
$\Omega_m$	0.253	$0.253^{+0.055}_{-0.052}$	Age/Gyr	13.514	$13.50^{+0.33}_{-0.34}$	$\chi_{\text{plikEE}}^2$	747.4	$755.8 (\nu: 10.6)$
$\Omega_m h^2$	0.1352	$0.1351^{+0.0071}_{-0.0065}$	$z_*$	1086.17	$1086.1^{+3.5}_{-3.4}$	$\chi_{\text{prior}}^2$	4.1	$8.5 (\nu: 6.4)$
$\Omega_m h^3$	0.09879	$0.0990^{+0.0043}_{-0.0039}$	$r_*$	145.16	$145.1^{+1.3}_{-1.3}$	$\chi_{\text{CMB}}^2$	11240.4	$11250.0 (\nu: 11.6)$
$\sigma_8$	0.780	$0.778^{+0.050}_{-0.050}$	$100\theta_*$	1.04001	$1.0401^{+0.0018}_{-0.0018}$			

Best-fit  $\chi_{\text{eff}}^2 = 11244.51$ ;  $\bar{\chi}_{\text{eff}}^2 = 11258.43$ ;  $R - 1 = 0.00674$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.00 plik\_dx11dr2\_HM\_v18\_EE: 747.40

### 3.24 base\_Alens\_CamSpecHM\_TE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02249	$0.02251^{+0.00063}_{-0.00062} \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	0.967	$0.966^{+0.051}_{-0.050} \quad (-0.4\sigma)$	$k_D$	0.13993	$0.1399^{+0.0012}_{-0.0012} \quad (-0.8\sigma)$
$\Omega_c h^2$	0.11579	$0.1156^{+0.0042}_{-0.0043} \quad (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	2.453	$2.46^{+0.38}_{-0.39} \quad (-0.3\sigma)$	$100\theta_D$	0.16078	$0.16077^{+0.00078}_{-0.00074} \quad (+0.3\sigma)$
$100\theta_{MC}$	1.04134	$1.04139^{+0.00098}_{-0.00098} \quad (+0.5\sigma)$	$z_{re}$	8.48	$8.3^{+4.1}_{-4.3} \quad (+0.2\sigma)$	$z_{eq}$	3304	$3301^{+95}_{-95} \quad (-0.8\sigma)$
$\tau$	0.0635	$0.063^{+0.043}_{-0.042} \quad (+0.2\sigma)$	$10^9 A_s$	2.102	$2.10^{+0.20}_{-0.18} \quad (-0.1\sigma)$	$100\theta_{eq}$	0.8319	$0.833^{+0.020}_{-0.019} \quad (+0.7\sigma)$
$A_L$	1.080	$1.10^{+0.39}_{-0.37} \quad (-0.1\sigma)$	$10^9 A_s e^{-2\tau}$	1.851	$1.851^{+0.058}_{-0.058} \quad (-0.9\sigma)$	$r_{drag}/D_V(0.57)$	0.07279	$0.0729^{+0.0016}_{-0.0015} \quad (+0.7\sigma)$
$\ln(10^{10} A_s)$	3.045	$3.045^{+0.092}_{-0.091} \quad (-0.1\sigma)$	$D_{40}$	1174	$1172^{+57}_{-54} \quad (-0.8\sigma)$	$H(0.57)$	93.62	$93.7^{+1.0}_{-1.0} \quad (+0.5\sigma)$
$n_s$	0.9860	$0.987^{+0.031}_{-0.030} \quad (+0.4\sigma)$	$D_{220}$	5637	$5635^{+160}_{-160} \quad (-1.0\sigma)$	$D_A(0.57)$	1368.1	$1367^{+27}_{-28} \quad (-0.6\sigma)$
$y_{cal}$	0.99999	$0.9999^{+0.0048}_{-0.0049} \quad (-0.1\sigma)$	$D_{810}$	2523	$2523^{+87}_{-83} \quad (-0.6\sigma)$	$F_{AP}(0.57)$	0.6707	$0.6705^{+0.0066}_{-0.0066} \quad (-0.7\sigma)$
$c_{TE}$	0.9987	$0.999^{+0.019}_{-0.020}$	$D_{1420}$	818.8	$819^{+37}_{-35} \quad (-0.3\sigma)$	$f\sigma_8(0.57)$	0.4618	$0.461^{+0.025}_{-0.024} \quad (-0.4\sigma)$
$H_0$	69.10	$69.2^{+2.1}_{-2.0} \quad (+0.6\sigma)$	$n_{s,0.002}$	0.9860	$0.987^{+0.031}_{-0.030} \quad (+0.4\sigma)$	$\sigma_8(0.57)$	0.6029	$0.603^{+0.030}_{-0.029} \quad (-0.1\sigma)$
$\Omega_\Lambda$	0.7091	$0.710^{+0.025}_{-0.025} \quad (+0.7\sigma)$	$Y_P$	0.245026	$0.24504^{+0.00026}_{-0.00026} \quad (-3.0\sigma)$	$Y_P^{BBN}$	0.246356	$0.24636^{+0.00027}_{-0.00027} \quad (-3.0\sigma)$
$\Omega_m$	0.2909	$0.290^{+0.025}_{-0.025} \quad (-0.7\sigma)$	Age/Gyr	13.754	$13.749^{+0.088}_{-0.093} \quad (-0.3\sigma)$	$\chi^2_{lowTEB}$	10491.90	$10493.3 \quad (\nu: 1.3) \quad (-0.4\sigma)$
$\Omega_m h^2$	0.13893	$0.1388^{+0.0040}_{-0.0040} \quad (-0.8\sigma)$	$z_*$	1089.38	$1089.3^{+1.0}_{-1.0} \quad (-0.3\sigma)$	$\chi^2_{CamSpec}$	2694.7	$2700.3 \quad (\nu: 5.8)$
$\Omega_m h^3$	0.09600	$0.0960^{+0.0011}_{-0.0011} \quad (-0.3\sigma)$	$r_*$	145.44	$145.47^{+0.96}_{-0.97} \quad (+0.9\sigma)$	$\chi^2_{prior}$	10.04	$12.0 \quad (\nu: 1.9) \quad (+1.1\sigma)$
$\sigma_8$	0.8036	$0.803^{+0.040}_{-0.039} \quad (-0.2\sigma)$	$100\theta_*$	1.04154	$1.04157^{+0.00096}_{-0.00098} \quad (+0.6\sigma)$	$\chi^2_{CMB}$	13186.6	$13193.6 \quad (\nu: 7.1) \quad (+391.7\sigma)$
$\sigma_8 \Omega_m^{0.5}$	0.4334	$0.432^{+0.031}_{-0.030} \quad (-0.6\sigma)$	$z_{drag}$	1059.89	$1059.9^{+1.3}_{-1.3} \quad (-0.2\sigma)$			
$\sigma_8 \Omega_m^{0.25}$	0.5902	$0.589^{+0.034}_{-0.032} \quad (-0.5\sigma)$	$r_{drag}$	148.08	$148.11^{+0.98}_{-0.99} \quad (+0.9\sigma)$			

Best-fit  $\chi^2_{eff} = 13196.65$ ;  $\Delta\chi^2_{eff} = 1769.86$ ;  $\bar{\chi}^2_{eff} = 13205.59$ ;  $\Delta\bar{\chi}^2_{eff} = 1763.84$ ;  $R - 1 = 0.00889$

$\chi^2_{eff}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10491.90 ( $\Delta$  -0.72) CamSpec like\_v9.10CMH\_unified: 2694.70

### 3.25 base\_Alens\_CamSpecHM\_EE\_lowTEB

Parameter	Best fit	95% limits		Parameter	Best fit	95% limits		Parameter	Best fit	95% limits	
$\Omega_b h^2$	0.02455	$0.0246^{+0.0023}_{-0.0022}$	$(-0.3\sigma)$	$\sigma_8/h^{0.5}$	0.930	$0.927^{+0.082}_{-0.078}$	$(+0.4\sigma)$	$k_D$	0.14290	$0.1429^{+0.0022}_{-0.0023}$	$(+0.2\sigma)$
$\Omega_c h^2$	0.1130	$0.1129^{+0.0082}_{-0.0079}$	$(+0.8\sigma)$	$\langle d^2 \rangle^{1/2}$	2.614	$2.61^{+0.39}_{-0.40}$	$(-1.1\sigma)$	$100\theta_D$	0.15812	$0.1581^{+0.0022}_{-0.0022}$	$(+0.2\sigma)$
$100\theta_{MC}$	1.03990	$1.0399^{+0.0014}_{-0.0014}$	$(-0.2\sigma)$	$z_{re}$	7.41	$7.2^{+3.6}_{-4.1}$	$(-0.1\sigma)$	$z_{eq}$	3288	$3287^{+150}_{-150}$	$(+0.9\sigma)$
$\tau$	0.0574	$0.056^{+0.038}_{-0.043}$	$(-0.2\sigma)$	$10^9 A_s$	2.122	$2.12^{+0.18}_{-0.18}$	$(-0.3\sigma)$	$100\theta_{eq}$	0.8398	$0.841^{+0.034}_{-0.034}$	$(-0.8\sigma)$
$A_L$	1.243	$1.26^{+0.45}_{-0.44}$	$(-1.1\sigma)$	$10^9 A_s e^{-2\tau}$	1.892	$1.892^{+0.055}_{-0.054}$	$(-0.4\sigma)$	$r_{drag}/D_V(0.57)$	0.07362	$0.0737^{+0.0032}_{-0.0030}$	$(-0.7\sigma)$
$\ln(10^{10} A_s)$	3.055	$3.053^{+0.084}_{-0.082}$	$(-0.3\sigma)$	$D_{40}$	1233	$1234^{+54}_{-53}$	$(+0.7\sigma)$	$H(0.57)$	95.18	$95.3^{+3.0}_{-2.7}$	$(-0.5\sigma)$
$n_s$	0.9814	$0.982^{+0.025}_{-0.023}$	$(-1.1\sigma)$	$D_{220}$	6031	$6042^{+370}_{-370}$	$(-0.3\sigma)$	$D_A(0.57)$	1335	$1334^{+67}_{-66}$	$(+0.6\sigma)$
$y_{cal}$	0.99999	$0.99998^{+0.0050}_{-0.0051}$	$(-0.0\sigma)$	$D_{810}$	2574	$2574^{+83}_{-79}$	$(-0.6\sigma)$	$F_{AP}(0.57)$	0.6656	$0.665^{+0.014}_{-0.014}$	$(+0.7\sigma)$
$c_{EE}$	0.9964	$0.997^{+0.019}_{-0.019}$		$D_{1420}$	837.7	$838^{+35}_{-34}$	$(-0.6\sigma)$	$f\sigma_8(0.57)$	0.4455	$0.444^{+0.039}_{-0.038}$	$(+0.4\sigma)$
$H_0$	71.35	$71.5^{+5.0}_{-4.9}$	$(-0.6\sigma)$	$n_{s,0.002}$	0.9814	$0.982^{+0.025}_{-0.023}$	$(-1.1\sigma)$	$\sigma_8(0.57)$	0.5940	$0.593^{+0.028}_{-0.028}$	$(-0.1\sigma)$
$\Omega_\Lambda$	0.728	$0.728^{+0.050}_{-0.051}$	$(-0.7\sigma)$	$Y_P$	0.24586	$0.24588^{+0.00085}_{-0.00088}$	$(-1.1\sigma)$	$Y_P^{BBN}$	0.24719	$0.24721^{+0.00085}_{-0.00088}$	$(-1.1\sigma)$
$\Omega_m$	0.272	$0.272^{+0.051}_{-0.050}$	$(+0.7\sigma)$	Age/Gyr	13.578	$13.57^{+0.27}_{-0.28}$	$(+0.4\sigma)$	$\chi^2_{lowTEB}$	10494.28	$10495.5 (\nu: 2.3)$	$(+0.8\sigma)$
$\Omega_m h^2$	0.1382	$0.1382^{+0.0064}_{-0.0064}$	$(+0.9\sigma)$	$z_*$	1086.83	$1086.8^{+3.0}_{-3.0}$	$(+0.4\sigma)$	$\chi^2_{CamSpec}$	2185.7	$2191.5 (\nu: 7.2)$	
$\Omega_m h^3$	0.09863	$0.0988^{+0.0033}_{-0.0031}$	$(-0.1\sigma)$	$r_*$	144.57	$144.5^{+1.1}_{-1.1}$	$(-0.9\sigma)$	$\chi^2_{prior}$	10.16	$12.1 (\nu: 2.2)$	$(+1.0\sigma)$
$\sigma_8$	0.7852	$0.783^{+0.046}_{-0.046}$	$(+0.2\sigma)$	$100\theta_*$	1.03986	$1.0399^{+0.0014}_{-0.0014}$	$(-0.2\sigma)$	$\chi^2_{CMB}$	12680.0	$12687.0 (\nu: 6.9)$	$(+297.9\sigma)$
$\sigma_8 \Omega_m^{0.5}$	0.409	$0.408^{+0.058}_{-0.056}$	$(+0.6\sigma)$	$z_{drag}$	1064.32	$1064.4^{+4.4}_{-4.4}$	$(-0.3\sigma)$				
$\sigma_8 \Omega_m^{0.25}$	0.567	$0.565^{+0.056}_{-0.052}$	$(+0.5\sigma)$	$r_{drag}$	146.56	$146.5^{+1.2}_{-1.2}$	$(-0.6\sigma)$				

Best-fit  $\chi^2_{eff} = 12690.15$ ;  $\Delta\chi^2_{eff} = 1445.65$ ;  $\bar{\chi}^2_{eff} = 12699.13$ ;  $\Delta\bar{\chi}^2_{eff} = 1440.70$ ;  $R - 1 = 0.00797$

$\chi^2_{eff}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.27 ( $\Delta$  1.28) CamSpec like\_v9.10CMH\_unified: 2185.72

### 3.26 base\_Alens\_plikHM\_TE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02224	$0.02224^{+0.00075}_{-0.00073}$	$\sigma_8$	0.8016	$0.801^{+0.036}_{-0.035}$	$100\theta_*$	1.04116	$1.0411^{+0.0010}_{-0.0010}$
$\Omega_c h^2$	0.1191	$0.1188^{+0.0051}_{-0.0050}$	$\sigma_8 \Omega_m^{0.5}$	0.4469	$0.446^{+0.033}_{-0.032}$	$D_A/\text{Gpc}$	13.904	$13.912^{+0.095}_{-0.094}$
$100\theta_{\text{MC}}$	1.04096	$1.0409^{+0.0011}_{-0.0011}$	$\sigma_8 \Omega_m^{0.25}$	0.5986	$0.597^{+0.034}_{-0.033}$	$z_{\text{drag}}$	1059.55	$1059.6^{+1.5}_{-1.5}$
$\tau$	0.0523	$0.053^{+0.033}_{-0.043}$	$\sigma_8/h^{0.5}$	0.9751	$0.974^{+0.050}_{-0.049}$	$r_{\text{drag}}$	147.48	$147.56^{+0.99}_{-0.99}$
$A_L$	0.957	$0.98^{+0.46}_{-0.42}$	$\langle d^2 \rangle^{1/2}$	2.372	$2.38^{+0.48}_{-0.49}$	$k_D$	0.14036	$0.1403^{+0.0011}_{-0.0012}$
$\ln(10^{10} A_s)$	3.029	$3.030^{+0.081}_{-0.084}$	$z_{\text{re}}$	7.49	$7.4^{+3.7}_{-4.4}$	$100\theta_D$	0.16097	$0.16098^{+0.00090}_{-0.00087}$
$n_s$	0.9619	$0.963^{+0.040}_{-0.039}$	$10^9 A_s$	2.068	$2.07^{+0.17}_{-0.17}$	$z_{\text{eq}}$	3377	$3370^{+110}_{-110}$
$y_{\text{cal}}$	0.9998	$0.99997^{+0.0050}_{-0.0050}$	$10^9 A_s e^{-2\tau}$	1.8620	$1.862^{+0.048}_{-0.048}$	$k_{\text{eq}}$	0.010308	$0.01029^{+0.00034}_{-0.00033}$
$A_{100}^{\text{dustTE}}$	0.144	$0.137^{+0.074}_{-0.075}$	$D_{40}$	1227	$1228^{+74}_{-73}$	$100\theta_{\text{eq}}$	0.8174	$0.819^{+0.022}_{-0.021}$
$A_{100 \times 143}^{\text{dustTE}}$	0.134	$0.134^{+0.058}_{-0.057}$	$D_{220}$	5697	$5703^{+120}_{-120}$	$100\theta_{s,\text{eq}}$	0.4516	$0.452^{+0.011}_{-0.011}$
$A_{100 \times 217}^{\text{dustTE}}$	0.307	$0.30^{+0.17}_{-0.17}$	$D_{810}$	2513	$2514^{+75}_{-75}$	$r_{\text{drag}}/D_V(0.57)$	0.07162	$0.0717^{+0.0018}_{-0.0017}$
$A_{143}^{\text{dustTE}}$	0.158	$0.15^{+0.11}_{-0.11}$	$D_{1420}$	807.0	$807^{+37}_{-37}$	$H(0.57)$	92.97	$93.0^{+1.2}_{-1.1}$
$A_{143 \times 217}^{\text{dustTE}}$	0.332	$0.33^{+0.16}_{-0.16}$	$D_{2000}$	226.9	$227^{+17}_{-17}$	$D_A(0.57)$	1388.1	$1387^{+33}_{-33}$
$A_{217}^{\text{dustTE}}$	1.64	$1.65^{+0.51}_{-0.50}$	$n_{s,0.002}$	0.9619	$0.963^{+0.040}_{-0.039}$	$F_{\text{AP}}(0.57)$	0.6759	$0.6755^{+0.0083}_{-0.0079}$
$c_{100}$	0.99923	$0.9993^{+0.0020}_{-0.0019}$	$Y_P$	0.245336	$0.24533^{+0.00034}_{-0.00033}$	$f\sigma_8(0.57)$	0.4659	$0.465^{+0.024}_{-0.023}$
$H_0$	67.58	$67.7^{+2.5}_{-2.4}$	$Y_P^{\text{BBN}}$	0.246662	$0.24666^{+0.00034}_{-0.00034}$	$\sigma_8(0.57)$	0.5965	$0.596^{+0.027}_{-0.025}$
$\Omega_\Lambda$	0.6891	$0.690^{+0.030}_{-0.033}$	$10^5 \text{D/H}$	2.616	$2.62^{+0.14}_{-0.14}$	$\chi^2_{\text{lowEB}}$	5430.77	$5431.7 (\nu: 0.7)$
$\Omega_m$	0.3109	$0.310^{+0.033}_{-0.030}$	Age/Gyr	13.806	$13.80^{+0.11}_{-0.11}$	$\chi^2_{\text{plikTE}}$	931.4	$939.3 (\nu: 9.2)$
$\Omega_m h^2$	0.14197	$0.1417^{+0.0046}_{-0.0046}$	$z_*$	1090.01	$1090.0^{+1.3}_{-1.3}$	$\chi^2_{\text{prior}}$	1.6	$7.8 (\nu: 6.6)$
$\Omega_m h^3$	0.09595	$0.0959^{+0.0012}_{-0.0012}$	$r_*$	144.77	$144.8^{+1.0}_{-1.0}$	$\chi^2_{\text{CMB}}$	6362.2	$6371.1 (\nu: 9.9)$

Best-fit  $\chi^2_{\text{eff}} = 6363.86$ ;  $\bar{\chi}^2_{\text{eff}} = 6378.92$ ;  $R - 1 = 0.00925$

$\chi^2_{\text{eff}}$ : CMB - lowl\_QU\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 5430.77 plik\_dx11dr2\_HM\_v18\_TE: 931.45

### 3.27 base\_Alens\_plikHM\_EE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02485	$0.0248^{+0.0028}_{-0.0027}$	$\sigma_8 \Omega_m^{0.5}$	0.401	$0.401^{+0.070}_{-0.064}$	$D_A/\text{Gpc}$	13.921	$13.92^{+0.13}_{-0.13}$
$\Omega_c h^2$	0.1115	$0.111^{+0.010}_{-0.0098}$	$\sigma_8 \Omega_m^{0.25}$	0.560	$0.559^{+0.064}_{-0.062}$	$z_{\text{drag}}$	1064.9	$1064.8^{+5.4}_{-5.3}$
$100\theta_{\text{MC}}$	1.03984	$1.0399^{+0.0019}_{-0.0019}$	$\sigma_8/h^{0.5}$	0.920	$0.919^{+0.093}_{-0.091}$	$r_{\text{drag}}$	146.66	$146.7^{+1.6}_{-1.6}$
$\tau$	0.0564	$< 0.0895$	$\langle d^2 \rangle^{1/2}$	2.872	$2.86^{+0.46}_{-0.50}$	$k_D$	0.14294	$0.1428^{+0.0028}_{-0.0027}$
$A_L$	1.51	$1.54^{+0.62}_{-0.60}$	$z_{\text{re}}$	7.24	$7.0^{+3.6}_{-4.2}$	$100\theta_D$	0.15787	$0.1580^{+0.0027}_{-0.0026}$
$\ln(10^{10} A_s)$	3.064	$3.061^{+0.086}_{-0.089}$	$10^9 A_s$	2.141	$2.14^{+0.19}_{-0.19}$	$z_{\text{eq}}$	3257	$3256^{+190}_{-180}$
$n_s$	0.9833	$0.987^{+0.038}_{-0.035}$	$10^9 A_s e^{-2\tau}$	1.913	$1.911^{+0.054}_{-0.052}$	$k_{\text{eq}}$	0.00994	$0.00994^{+0.00059}_{-0.00055}$
$y_{\text{cal}}$	1.00013	$0.9999^{+0.0050}_{-0.0049}$	$D_{40}$	1249	$1239^{+73}_{-72}$	$100\theta_{\text{eq}}$	0.8465	$0.847^{+0.044}_{-0.043}$
$A_{100}^{\text{dustEE}}$	0.0804	$0.081^{+0.012}_{-0.012}$	$D_{220}$	6154	$6128^{+420}_{-420}$	$100\theta_{s,\text{eq}}$	0.4647	$0.465^{+0.021}_{-0.021}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0486	$0.048^{+0.011}_{-0.011}$	$D_{810}$	2597	$2596^{+78}_{-77}$	$r_{\text{drag}}/D_V(0.57)$	0.07418	$0.0743^{+0.0041}_{-0.0038}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.098^{+0.064}_{-0.063}$	$D_{1420}$	843.6	$844^{+38}_{-38}$	$H(0.57)$	95.62	$95.7^{+3.8}_{-3.7}$
$A_{143}^{\text{dustEE}}$	0.0999	$0.099^{+0.015}_{-0.014}$	$D_{2000}$	246.3	$247^{+16}_{-17}$	$D_A(0.57)$	1324	$1324^{+82}_{-82}$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.221^{+0.091}_{-0.092}$	$n_{s,0.002}$	0.9833	$0.987^{+0.038}_{-0.035}$	$F_{\text{AP}}(0.57)$	0.6632	$0.663^{+0.017}_{-0.015}$
$A_{217}^{\text{dustEE}}$	0.615	$0.64^{+0.26}_{-0.25}$	$Y_P$	0.24642	$0.2464^{+0.0010}_{-0.0011}$	$f\sigma_8(0.57)$	0.4407	$0.440^{+0.044}_{-0.045}$
$H_0$	72.2	$72.3^{+6.4}_{-6.1}$	$Y_P^{\text{BBN}}$	0.24775	$0.2477^{+0.0010}_{-0.0011}$	$\sigma_8(0.57)$	0.5936	$0.593^{+0.029}_{-0.029}$
$\Omega_\Lambda$	0.737	$0.736^{+0.059}_{-0.063}$	$10^5 D/H$	2.190	$2.21^{+0.42}_{-0.39}$	$\chi_{\text{lowEB}}^2$	5430.70	$5431.7 (\nu: 0.8)$
$\Omega_m$	0.263	$0.264^{+0.063}_{-0.059}$	Age/Gyr	13.541	$13.54^{+0.33}_{-0.35}$	$\chi_{\text{plikEE}}^2$	747.4	$756.0 (\nu: 10.9)$
$\Omega_m h^2$	0.1370	$0.1369^{+0.0081}_{-0.0075}$	$z_*$	1086.42	$1086.5^{+3.7}_{-3.3}$	$\chi_{\text{prior}}^2$	3.5	$8.0 (\nu: 6.3)$
$\Omega_m h^3$	0.09886	$0.0988^{+0.0041}_{-0.0041}$	$r_*$	144.75	$144.8^{+1.4}_{-1.4}$	$\chi_{\text{CMB}}^2$	6178.1	$6187.6 (\nu: 11.6)$
$\sigma_8$	0.782	$0.780^{+0.050}_{-0.052}$	$100\theta_*$	1.03978	$1.0399^{+0.0018}_{-0.0019}$			

Best-fit  $\chi_{\text{eff}}^2 = 6181.60$ ;  $\bar{\chi}_{\text{eff}}^2 = 6195.67$ ;  $R - 1 = 0.00929$

$\chi_{\text{eff}}^2$ : CMB - lowl\_QU\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 5430.70 plik\_dx11dr2\_HM\_v18\_EE: 747.38

### 3.28 base\_Alens\_CamSpecHM\_TE\_lowEB

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00077}_{-0.00074} (+0.3\sigma)$	$\sigma_8/h^{0.5}$	$0.961^{+0.051}_{-0.049} (-0.5\sigma)$	$k_D$	$0.1399^{+0.0012}_{-0.0012} (-0.6\sigma)$
$\Omega_c h^2$	$0.1166^{+0.0052}_{-0.0050} (-0.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.38^{+0.45}_{-0.48} (+0.0\sigma)$	$100\theta_D$	$0.16093^{+0.00089}_{-0.00088} (-0.1\sigma)$
$100\theta_{MC}$	$1.04128^{+0.00099}_{-0.0010} (+0.7\sigma)$	$z_{re}$	$7.5^{+3.8}_{-4.4} (+0.0\sigma)$	$z_{eq}$	$3320^{+110}_{-110} (-0.9\sigma)$
$\tau$	$0.054^{+0.035}_{-0.043} (+0.1\sigma)$	$10^9 A_s$	$2.06^{+0.18}_{-0.18} (-0.1\sigma)$	$100\theta_{eq}$	$0.829^{+0.022}_{-0.022} (+0.9\sigma)$
$A_L$	$1.03^{+0.46}_{-0.43} (+0.2\sigma)$	$10^9 A_s e^{-2\tau}$	$1.849^{+0.061}_{-0.059} (-0.5\sigma)$	$r_{drag}/D_V(0.57)$	$0.0725^{+0.0018}_{-0.0018} (+0.9\sigma)$
$\ln(10^{10} A_s)$	$3.025^{+0.085}_{-0.083} (-0.1\sigma)$	$D_{40}$	$1190^{+78}_{-74} (-1.0\sigma)$	$H(0.57)$	$93.4^{+1.2}_{-1.1} (+0.7\sigma)$
$n_s$	$0.977^{+0.040}_{-0.040} (+0.7\sigma)$	$D_{220}$	$5647^{+160}_{-160} (-0.9\sigma)$	$D_A(0.57)$	$1374^{+33}_{-33} (-0.8\sigma)$
$y_{cal}$	$0.99998^{+0.0048}_{-0.0048} (+0.0\sigma)$	$D_{810}$	$2514^{+93}_{-90} (-0.0\sigma)$	$F_{AP}(0.57)$	$0.6721^{+0.0082}_{-0.0077} (-0.8\sigma)$
$c_{TE}$	$0.9998^{+0.020}_{-0.020}$	$D_{1420}$	$813^{+42}_{-40} (+0.3\sigma)$	$f\sigma_8(0.57)$	$0.459^{+0.025}_{-0.024} (-0.5\sigma)$
$H_0$	$68.7^{+2.5}_{-2.5} (+0.8\sigma)$	$n_{s,0.002}$	$0.977^{+0.040}_{-0.040} (+0.7\sigma)$	$\sigma_8(0.57)$	$0.596^{+0.028}_{-0.028} (-0.0\sigma)$
$\Omega_\Lambda$	$0.704^{+0.031}_{-0.031} (+0.8\sigma)$	$Y_P$	$0.24497^{+0.00032}_{-0.00032} (-2.2\sigma)$	$Y_P^{BBN}$	$0.24630^{+0.00033}_{-0.00032} (-2.2\sigma)$
$\Omega_m$	$0.296^{+0.031}_{-0.031} (-0.8\sigma)$	Age/Gyr	$13.77^{+0.11}_{-0.11} (-0.6\sigma)$	$\chi^2_{lowEB}$	$5431.7 (\nu: 0.7) (-0.0\sigma)$
$\Omega_m h^2$	$0.1396^{+0.0047}_{-0.0045} (-0.9\sigma)$	$z_*$	$1089.6^{+1.3}_{-1.3} (-0.5\sigma)$	$\chi^2_{CamSpec}$	$2700.4 (\nu: 5.8)$
$\Omega_m h^3$	$0.0959^{+0.0012}_{-0.0012} (-0.0\sigma)$	$r_*$	$145.3^{+1.0}_{-1.0} (+0.9\sigma)$	$\chi^2_{prior}$	$12.0 (\nu: 2.0) (+1.2\sigma)$
$\sigma_8$	$0.796^{+0.038}_{-0.036} (-0.3\sigma)$	$100\theta_*$	$1.04148^{+0.00096}_{-0.00098} (+0.7\sigma)$	$\chi^2_{CMB}$	$8132.1 (\nu: 6.5) (+394.9\sigma)$
$\sigma_8 \Omega_m^{0.5}$	$0.433^{+0.034}_{-0.032} (-0.7\sigma)$	$z_{drag}$	$1059.6^{+1.6}_{-1.5} (+0.1\sigma)$		
$\sigma_8 \Omega_m^{0.25}$	$0.587^{+0.034}_{-0.033} (-0.6\sigma)$	$r_{drag}$	$148.0^{+1.0}_{-1.0} (+0.9\sigma)$		

$$\bar{\chi}^2_{eff} = 8144.13; \Delta\bar{\chi}^2_{eff} = 1765.21; R - 1 = 0.00558$$

### 3.29 base\_Alens\_CamSpecHM\_EE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02430	$0.0244^{+0.0022}_{-0.0021} \quad (-0.3\sigma)$	$\sigma_8/h^{0.5}$	0.944	$0.940^{+0.081}_{-0.080} \quad (+0.4\sigma)$	$k_D$	0.14309	$0.1431^{+0.0021}_{-0.0022} \quad (+0.2\sigma)$
$\Omega_c h^2$	0.1152	$0.1150^{+0.0086}_{-0.0082} \quad (+0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	2.590	$2.59^{+0.39}_{-0.42} \quad (-1.1\sigma)$	$100\theta_D$	0.15829	$0.1583^{+0.0023}_{-0.0022} \quad (+0.2\sigma)$
$100\theta_{MC}$	1.03971	$1.0397^{+0.0015}_{-0.0015} \quad (-0.2\sigma)$	$z_{re}$	7.23	$7.0^{+3.5}_{-4.2} \quad (-0.0\sigma)$	$z_{eq}$	3333	$3331^{+160}_{-150} \quad (+0.8\sigma)$
$\tau$	0.0546	$0.053^{+0.033}_{-0.043} \quad (-0.1\sigma)$	$10^9 A_s$	2.126	$2.12^{+0.18}_{-0.18} \quad (-0.2\sigma)$	$100\theta_{eq}$	0.8304	$0.832^{+0.035}_{-0.034} \quad (-0.7\sigma)$
$A_L$	1.170	$1.19^{+0.44}_{-0.43} \quad (-1.2\sigma)$	$10^9 A_s e^{-2\tau}$	1.906	$1.905^{+0.058}_{-0.056} \quad (-0.2\sigma)$	$r_{drag}/D_V(0.57)$	0.07284	$0.0730^{+0.0032}_{-0.0030} \quad (-0.7\sigma)$
$\ln(10^{10} A_s)$	3.057	$3.054^{+0.083}_{-0.081} \quad (-0.2\sigma)$	$D_{40}$	1266	$1263^{+64}_{-63} \quad (+0.6\sigma)$	$H(0.57)$	94.68	$94.8^{+2.9}_{-2.8} \quad (-0.5\sigma)$
$n_s$	0.9690	$0.971^{+0.027}_{-0.026} \quad (-0.9\sigma)$	$D_{220}$	6072	$6075^{+360}_{-360} \quad (-0.3\sigma)$	$D_A(0.57)$	1349	$1347^{+67}_{-67} \quad (+0.5\sigma)$
$y_{cal}$	0.99992	$0.9999^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$D_{810}$	2580	$2579^{+82}_{-79} \quad (-0.4\sigma)$	$F_{AP}(0.57)$	0.6688	$0.669^{+0.014}_{-0.013} \quad (+0.6\sigma)$
$c_{EE}$	1.0005	$0.9999^{+0.020}_{-0.019}$	$D_{1420}$	835.2	$835^{+34}_{-34} \quad (-0.5\sigma)$	$f\sigma_8(0.57)$	0.4525	$0.450^{+0.038}_{-0.039} \quad (+0.5\sigma)$
$H_0$	70.3	$70.5^{+5.1}_{-4.9} \quad (-0.6\sigma)$	$n_{s,0.002}$	0.9690	$0.971^{+0.027}_{-0.026} \quad (-0.9\sigma)$	$\sigma_8(0.57)$	0.5954	$0.594^{+0.027}_{-0.027} \quad (+0.1\sigma)$
$\Omega_\Lambda$	0.716	$0.717^{+0.053}_{-0.055} \quad (-0.6\sigma)$	$Y_P$	0.24577	$0.24579^{+0.00083}_{-0.00087} \quad (-1.1\sigma)$	$Y_P^{BBN}$	0.24709	$0.24712^{+0.00083}_{-0.00086} \quad (-1.1\sigma)$
$\Omega_m$	0.284	$0.283^{+0.055}_{-0.053} \quad (+0.6\sigma)$	Age/Gyr	13.618	$13.61^{+0.26}_{-0.28} \quad (+0.4\sigma)$	$\chi^2_{lowEB}$	5430.71	$5431.7 \quad (\nu: 0.7) \quad (-0.0\sigma)$
$\Omega_m h^2$	0.1401	$0.1400^{+0.0068}_{-0.0064} \quad (+0.8\sigma)$	$z_*$	1087.26	$1087.2^{+3.1}_{-3.0} \quad (+0.4\sigma)$	$\chi^2_{CamSpec}$	2184.6	$2190.7 \quad (\nu: 6.1)$
$\Omega_m h^3$	0.09849	$0.0986^{+0.0032}_{-0.0030} \quad (-0.1\sigma)$	$r_*$	144.20	$144.2^{+1.1}_{-1.1} \quad (-0.8\sigma)$	$\chi^2_{prior}$	10.03	$12.0 \quad (\nu: 2.0) \quad (+1.1\sigma)$
$\sigma_8$	0.7912	$0.789^{+0.046}_{-0.045} \quad (+0.3\sigma)$	$100\theta_*$	1.03971	$1.0397^{+0.0014}_{-0.0014} \quad (-0.2\sigma)$	$\chi^2_{CMB}$	7615.3	$7622.4 \quad (\nu: 6.8) \quad (+297.6\sigma)$
$\sigma_8 \Omega_m^{0.5}$	0.421	$0.420^{+0.060}_{-0.056} \quad (+0.5\sigma)$	$z_{drag}$	1063.94	$1064.1^{+4.3}_{-4.3} \quad (-0.3\sigma)$			
$\sigma_8 \Omega_m^{0.25}$	0.577	$0.575^{+0.056}_{-0.054} \quad (+0.5\sigma)$	$r_{drag}$	146.25	$146.2^{+1.3}_{-1.2} \quad (-0.6\sigma)$			

Best-fit  $\chi^2_{eff} = 7625.35$ ;  $\Delta\chi^2_{eff} = 1443.75$ ;  $\bar{\chi}^2_{eff} = 7634.39$ ;  $\Delta\bar{\chi}^2_{eff} = 1438.72$ ;  $R - 1 = 0.00573$

$\chi^2_{eff}$ : CMB - lowl\_QU\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 5430.71 ( $\Delta$  0.01) CamSpec like\_v9.10CMH\_unified: 2184.61



### 3.30 base\_Alens\_plikHM\_TT\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02261	$0.02250^{+0.00060}_{-0.00058}$	$\Omega_m$	0.2994	$0.304^{+0.035}_{-0.031}$	$D_A/\text{Gpc}$	13.914	$13.907^{+0.099}_{-0.10}$
$\Omega_c h^2$	0.1175	$0.1181^{+0.0055}_{-0.0053}$	$\Omega_m h^2$	0.14072	$0.1413^{+0.0050}_{-0.0049}$	$z_{\text{drag}}$	1060.31	$1060.1^{+1.1}_{-1.1}$
$100\theta_{\text{MC}}$	1.04124	$1.0412^{+0.0011}_{-0.0011}$	$\Omega_m h^3$	0.09648	$0.09635^{+0.00098}_{-0.00096}$	$r_{\text{drag}}$	147.49	$147.4^{+1.0}_{-1.1}$
$\tau$	0.0578	$0.054^{+0.035}_{-0.043}$	$\sigma_8$	0.8047	$0.804^{+0.035}_{-0.035}$	$k_D$	0.14063	$0.1406^{+0.0010}_{-0.0010}$
$A_L$	1.224	$1.20^{+0.22}_{-0.19}$	$\sigma_8 \Omega_m^{0.5}$	0.4403	$0.443^{+0.038}_{-0.037}$	$100\theta_D$	0.16056	$0.16068^{+0.00062}_{-0.00061}$
$\ln(10^{10} A_s)$	3.046	$3.039^{+0.076}_{-0.077}$	$\sigma_8 \Omega_m^{0.25}$	0.5953	$0.597^{+0.037}_{-0.037}$	$z_{\text{eq}}$	3347	$3361^{+120}_{-120}$
$n_s$	0.9727	$0.969^{+0.016}_{-0.015}$	$\sigma_8/h^{0.5}$	0.972	$0.973^{+0.053}_{-0.054}$	$k_{\text{eq}}$	0.010217	$0.01026^{+0.00037}_{-0.00035}$
$y_{\text{cal}}$	1.00001	$1.0001^{+0.0050}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.660	$2.63^{+0.15}_{-0.15}$	$100\theta_{\text{eq}}$	0.8242	$0.822^{+0.023}_{-0.023}$
$A_{217}^{\text{CIB}}$	58.9	$62^{+10}_{-10}$	$z_{\text{re}}$	7.94	$7.5^{+3.7}_{-4.4}$	$100\theta_{s,\text{eq}}$	0.4549	$0.454^{+0.012}_{-0.012}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.83	—	$10^9 A_s$	2.103	$2.09^{+0.16}_{-0.17}$	$r_{\text{drag}}/D_V(0.57)$	0.07225	$0.0720^{+0.0019}_{-0.0019}$
$A_{143}^{\text{tSZ}}$	6.67	$5.4^{+3.9}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8729	$1.875^{+0.031}_{-0.030}$	$H(0.57)$	93.50	$93.3^{+1.2}_{-1.1}$
$A_{100}^{\text{PS}}$	240	$252^{+60}_{-60}$	$D_{40}$	1215.8	$1223^{+39}_{-38}$	$D_A(0.57)$	1374.3	$1379^{+34}_{-34}$
$A_{143}^{\text{PS}}$	45.9	$40^{+20}_{-20}$	$D_{220}$	5742	$5742^{+82}_{-83}$	$F_{\text{AP}}(0.57)$	0.6729	$0.6741^{+0.0087}_{-0.0082}$
$A_{143 \times 217}^{\text{PS}}$	52.9	$38^{+20}_{-20}$	$D_{810}$	2530.4	$2529^{+28}_{-28}$	$f\sigma_8(0.57)$	0.4647	$0.465^{+0.025}_{-0.026}$
$A_{217}^{\text{PS}}$	107.1	$98^{+20}_{-20}$	$D_{1420}$	815.3	$813^{+10}_{-10}$	$\sigma_8(0.57)$	0.6016	$0.600^{+0.024}_{-0.023}$
$A^{\text{kSZ}}$	0.00	$< 7.68$	$D_{2000}$	232.78	$231.6^{+4.1}_{-4.2}$	$f_{2000}^{143}$	25.8	$28^{+7}_{-7}$
$A_{100}^{\text{dustTT}}$	7.34	$7.4^{+3.7}_{-3.6}$	$n_{s,0.002}$	0.9727	$0.969^{+0.016}_{-0.015}$	$f_{2000}^{143 \times 217}$	29.49	$31^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	9.00	$8.9^{+3.6}_{-3.6}$	$Y_P$	0.245500	$0.24545^{+0.00026}_{-0.00026}$	$f_{2000}^{217}$	102.98	$104.3^{+4.6}_{-4.6}$
$A_{143 \times 217}^{\text{dustTT}}$	18.0	$16.7^{+8.1}_{-8.2}$	$Y_P^{\text{BBN}}$	0.246827	$0.24678^{+0.00026}_{-0.00026}$	$\chi_{\text{lowEB}}^2$	5430.77	$5431.7 (\nu: 0.7)$
$A_{217}^{\text{dustTT}}$	82.6	$81^{+10}_{-10}$	$10^5 D/H$	2.546	$2.57^{+0.11}_{-0.11}$	$\chi_{\text{plik}}^2$	760.6	$775.1 (\nu: 15.3)$
$c_{100}$	0.99802	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.752	$13.77^{+0.10}_{-0.10}$	$\chi_{\text{prior}}^2$	1.3	$7.2 (\nu: 6.1)$
$c_{217}$	0.99538	$0.9957^{+0.0029}_{-0.0029}$	$z_*$	1089.40	$1089.6^{+1.1}_{-1.1}$	$\chi_{\text{CMB}}^2$	6191.4	$6206.9 (\nu: 16.0)$
$H_0$	68.56	$68.2^{+2.6}_{-2.5}$	$r_*$	144.90	$144.8^{+1.1}_{-1.1}$			
$\Omega_\Lambda$	0.7006	$0.696^{+0.031}_{-0.035}$	$100\theta_*$	1.04140	$1.0413^{+0.0010}_{-0.0010}$			

Best-fit  $\chi_{\text{eff}}^2 = 6192.67$ ;  $\bar{\chi}_{\text{eff}}^2 = 6214.01$ ;  $R - 1 = 0.00725$

$\chi_{\text{eff}}^2$ : CMB - lowl\_QU\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 5430.77 plik\_dx11dr2\_HM\_v18.TT: 760.58

### 3.31 base\_Alens\_plikHM\_TTTEEE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022396	$0.02236^{+0.00035}_{-0.00034}$	$A_{100 \times 217}^{\text{dust}TE}$	0.301	$0.30^{+0.17}_{-0.16}$	Age/Gyr	13.792	$13.796^{+0.055}_{-0.058}$
$\Omega_c h^2$	0.11893	$0.1192^{+0.0032}_{-0.0031}$	$A_{143}^{\text{dust}TE}$	0.154	$0.15^{+0.11}_{-0.11}$	$z_*$	1089.79	$1089.86^{+0.65}_{-0.65}$
$100\theta_{\text{MC}}$	1.04087	$1.04086^{+0.00066}_{-0.00066}$	$A_{143 \times 217}^{\text{dust}TE}$	0.335	$0.33^{+0.16}_{-0.16}$	$r_*$	144.69	$144.65^{+0.66}_{-0.67}$
$\tau$	0.0551	$0.054^{+0.034}_{-0.042}$	$A_{217}^{\text{dust}TE}$	1.647	$1.65^{+0.50}_{-0.50}$	$100\theta_*$	1.04106	$1.04105^{+0.00064}_{-0.00064}$
$A_L$	1.153	$1.14^{+0.15}_{-0.14}$	$c_{100}$	0.99829	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.898	$13.895^{+0.062}_{-0.062}$
$\ln(10^{10} A_s)$	3.043	$3.041^{+0.075}_{-0.080}$	$c_{217}$	0.99565	$0.9958^{+0.0028}_{-0.0029}$	$z_{\text{drag}}$	1059.93	$1059.86^{+0.66}_{-0.64}$
$n_s$	0.9668	$0.965^{+0.010}_{-0.0099}$	$H_0$	67.74	$67.6^{+1.5}_{-1.4}$	$r_{\text{drag}}$	147.34	$147.32^{+0.64}_{-0.65}$
$y_{\text{cal}}$	0.99985	$0.99997^{+0.0049}_{-0.0050}$	$\Omega_\Lambda$	0.6906	$0.689^{+0.019}_{-0.020}$	$k_D$	0.14062	$0.14061^{+0.00066}_{-0.00066}$
$A_{217}^{\text{CIB}}$	62.0	$63^{+10}_{-10}$	$\Omega_m$	0.3094	$0.311^{+0.020}_{-0.019}$	$100\theta_D$	0.160750	$0.16079^{+0.00038}_{-0.00038}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.56	—	$\Omega_m h^2$	0.14197	$0.1422^{+0.0030}_{-0.0029}$	$z_{\text{eq}}$	3377	$3382^{+71}_{-70}$
$A_{143}^{\text{tSZ}}$	6.84	$5.5^{+3.5}_{-3.7}$	$\Omega_m h^3$	0.09617	$0.09614^{+0.00060}_{-0.00059}$	$k_{\text{eq}}$	0.010308	$0.01032^{+0.00022}_{-0.00021}$
$A_{100}^{\text{PS}}$	249	$257^{+50}_{-50}$	$\sigma_8$	0.8077	$0.807^{+0.033}_{-0.032}$	$100\theta_{\text{eq}}$	0.8178	$0.817^{+0.014}_{-0.014}$
$A_{143}^{\text{PS}}$	45.1	$42^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4493	$0.450^{+0.027}_{-0.026}$	$100\theta_{s,\text{eq}}$	0.4517	$0.4513^{+0.0069}_{-0.0069}$
$A_{143 \times 217}^{\text{PS}}$	47.8	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6024	$0.603^{+0.029}_{-0.029}$	$r_{\text{drag}}/D_V(0.57)$	0.07167	$0.0716^{+0.0011}_{-0.0011}$
$A_{217}^{\text{PS}}$	104.7	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9814	$0.982^{+0.044}_{-0.044}$	$H(0.57)$	93.09	$93.04^{+0.65}_{-0.61}$
$A^{\text{kSZ}}$	0.00	$< 7.46$	$\langle d^2 \rangle^{1/2}$	2.609	$2.60^{+0.11}_{-0.11}$	$D_A(0.57)$	1385.7	$1387^{+19}_{-19}$
$A_{100}^{\text{dust}TT}$	7.32	$7.4^{+3.7}_{-3.7}$	$z_{\text{re}}$	7.73	$7.5^{+3.7}_{-4.4}$	$F_{\text{AP}}(0.57)$	0.67550	$0.6759^{+0.0050}_{-0.0049}$
$A_{143}^{\text{dust}TT}$	8.83	$8.9^{+3.6}_{-3.7}$	$10^9 A_s$	2.098	$2.09^{+0.16}_{-0.17}$	$f\sigma_8(0.57)$	0.4691	$0.469^{+0.021}_{-0.021}$
$A_{143 \times 217}^{\text{dust}TT}$	17.7	$16.7^{+8.1}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8791	$1.879^{+0.025}_{-0.024}$	$\sigma_8(0.57)$	0.6013	$0.601^{+0.023}_{-0.024}$
$A_{217}^{\text{dust}TT}$	82.1	$81^{+10}_{-10}$	$D_{40}$	1227.7	$1232^{+30}_{-30}$	$f_{2000}^{143}$	27.6	$29^{+6}_{-5}$
$A_{100}^{\text{dust}EE}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5739	$5741^{+77}_{-77}$	$f_{2000}^{143 \times 217}$	30.93	$31^{+4}_{-4}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0490	$0.0487^{+0.0098}_{-0.0097}$	$D_{810}$	2532.0	$2531^{+27}_{-27}$	$f_{2000}^{217}$	104.44	$105.1^{+3.9}_{-3.9}$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.099^{+0.063}_{-0.064}$	$D_{1420}$	813.7	$812.8^{+9.4}_{-9.4}$	$\chi_{\text{lowEB}}^2$	5430.76	$5431.7 (\nu: 0.7)$
$A_{143}^{\text{dust}EE}$	0.1004	$0.100^{+0.013}_{-0.014}$	$D_{2000}$	231.24	$230.7^{+3.3}_{-3.2}$	$\chi_{\text{plik}}^2$	2429.4	$2448.8 (\nu: 22.0)$
$A_{143 \times 217}^{\text{dust}EE}$	0.222	$0.223^{+0.091}_{-0.090}$	$n_{s,0.002}$	0.9668	$0.965^{+0.010}_{-0.0099}$	$\chi_{\text{prior}}^2$	6.4	$19.2 (\nu: 15.0)$
$A_{217}^{\text{dust}EE}$	0.651	$0.65^{+0.26}_{-0.25}$	$Y_P$	0.245404	$0.24539^{+0.00015}_{-0.00016}$	$\chi_{\text{CMB}}^2$	7860.1	$7880.5 (\nu: 22.9)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.074}_{-0.075}$	$Y_P^{\text{BBN}}$	0.246731	$0.24671^{+0.00016}_{-0.00016}$			
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.131^{+0.057}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.586	$2.593^{+0.064}_{-0.065}$			

Best-fit  $\chi_{\text{eff}}^2 = 7866.54$ ;  $\bar{\chi}_{\text{eff}}^2 = 7899.69$ ;  $R - 1 = 0.00830$

$\chi_{\text{eff}}^2$ : CMB - lowl\_QU\_70\_dx11d.2014.10.03\_v5c\_Ap: 5430.76 plik\_dx11dr2\_HM\_v18.TTTEEE: 2429.35

### 3.32 base\_Alens\_CamSpecHM\_TT\_lowEB

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02255^{+0.00061}_{-0.00059} \quad (+0.2\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_*$	$145.0^{+1.1}_{-1.1} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1175^{+0.0054}_{-0.0051} \quad (-0.2\sigma)$	$H_0$	$68.5^{+2.5}_{-2.6} \quad (+0.2\sigma)$	$100\theta_*$	$1.0414^{+0.0010}_{-0.0010} \quad (+0.2\sigma)$
$100\theta_{\text{MC}}$	$1.0413^{+0.0011}_{-0.0011} \quad (+0.2\sigma)$	$\Omega_\Lambda$	$0.700^{+0.033}_{-0.034} \quad (+0.2\sigma)$	$z_{\text{drag}}$	$1060.2^{+1.2}_{-1.1} \quad (+0.1\sigma)$
$\tau$	$0.055^{+0.036}_{-0.043} \quad (+0.0\sigma)$	$\Omega_m$	$0.300^{+0.034}_{-0.033} \quad (-0.2\sigma)$	$r_{\text{drag}}$	$147.6^{+1.0}_{-1.1} \quad (+0.2\sigma)$
$A_L$	$1.21^{+0.23}_{-0.20} \quad (+0.2\sigma)$	$\Omega_m h^2$	$0.1407^{+0.0050}_{-0.0047} \quad (-0.2\sigma)$	$k_D$	$0.1405^{+0.0010}_{-0.0010} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.037^{+0.077}_{-0.077} \quad (-0.1\sigma)$	$\Omega_m h^3$	$0.0964^{+0.0010}_{-0.00096} \quad (+0.1\sigma)$	$100\theta_D$	$0.16063^{+0.00065}_{-0.00062} \quad (-0.1\sigma)$
$n_s$	$0.973^{+0.016}_{-0.016} \quad (+0.5\sigma)$	$\sigma_8$	$0.801^{+0.036}_{-0.036} \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3346^{+120}_{-110} \quad (-0.2\sigma)$
$y_{\text{cal}}$	$0.9999^{+0.0049}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.439^{+0.039}_{-0.037} \quad (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.824^{+0.023}_{-0.023} \quad (+0.2\sigma)$
$A_{100}^{\text{PS}}$	$237^{+50}_{-50} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.593^{+0.038}_{-0.037} \quad (-0.2\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0723^{+0.0019}_{-0.0019} \quad (+0.2\sigma)$
$A_{143}^{\text{PS}}$	$35^{+20}_{-20} \quad (-0.7\sigma)$	$\sigma_8/h^{0.5}$	$0.968^{+0.056}_{-0.054} \quad (-0.2\sigma)$	$H(0.57)$	$93.5^{+1.2}_{-1.1} \quad (+0.2\sigma)$
$A_{217}^{\text{PS}}$	$100^{+30}_{-30} \quad (+0.2\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.63^{+0.15}_{-0.15} \quad (-0.0\sigma)$	$D_A(0.57)$	$1375^{+34}_{-33} \quad (-0.2\sigma)$
$A_{217}^{\text{CIB}}$	$43^{+10}_{-10} \quad (-2.8\sigma)$	$z_{\text{re}}$	$7.5^{+3.7}_{-4.4} \quad (+0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.6731^{+0.0086}_{-0.0085} \quad (-0.2\sigma)$
$A_{143}^{\text{tSZ}}$	$< 7.07 \quad (-0.9\sigma)$	$10^9 A_s$	$2.09^{+0.16}_{-0.17} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.463^{+0.027}_{-0.026} \quad (-0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.24}_{-0.24}$	$10^9 A_s e^{-2\tau}$	$1.867^{+0.030}_{-0.030} \quad (-0.5\sigma)$	$\sigma_8(0.57)$	$0.599^{+0.024}_{-0.023} \quad (-0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1212^{+38}_{-38} \quad (-0.6\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24638^{+0.00026}_{-0.00026} \quad (-2.9\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5720^{+83}_{-81} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$26^{+7}_{-7} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{810}$	$2524^{+27}_{-27} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$104.3^{+4.7}_{-4.7} \quad (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.35}$	$D_{1420}$	$813^{+10}_{-9.9} \quad (-0.0\sigma)$	$f_{2000}^{143 \times 217}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$A_{217}^{\text{dust}}$	$1.23^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.973^{+0.016}_{-0.016} \quad (+0.5\sigma)$	$\chi_{\text{lowEB}}^2$	$5431.7 \quad (\nu: 0.8) \quad (+0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.97^{+0.35}_{-0.34}$	$Y_{\text{P}}$	$0.24505^{+0.00025}_{-0.00025} \quad (-3.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8057.8 \quad (\nu: 16.3)$
$c_{100}$	$0.9969^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$\text{Age/Gyr}$	$13.76^{+0.10}_{-0.10} \quad (-0.2\sigma)$	$\chi_{\text{prior}}^2$	$8.3 \quad (\nu: 5.9) \quad (+0.3\sigma)$
$c_{217}$	$0.9968^{+0.0035}_{-0.0035} \quad (+0.8\sigma)$	$z_*$	$1089.5^{+1.1}_{-1.1} \quad (-0.2\sigma)$	$\chi_{\text{CMB}}^2$	$13489.5 \quad (\nu: 17.0) \quad (+1286.1\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 13497.81; \Delta\bar{\chi}_{\text{eff}}^2 = 7283.79; R - 1 = 0.01106$$

### 3.33 base\_Alens\_CamSpecHM\_TTTEEE\_lowEB

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02248^{+0.00036}_{-0.00036} \quad (+0.7\sigma)$	$H_0$	$68.0^{+1.4}_{-1.4} \quad (+0.5\sigma)$	$100\theta_*$	$1.04111^{+0.00061}_{-0.00062} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1184^{+0.0031}_{-0.0031} \quad (-0.5\sigma)$	$\Omega_\Lambda$	$0.694^{+0.018}_{-0.019} \quad (+0.5\sigma)$	$D_A/\text{Gpc}$	$13.905^{+0.061}_{-0.061} \quad (+0.3\sigma)$
$100\theta_{\text{MC}}$	$1.04094^{+0.00062}_{-0.00064} \quad (+0.2\sigma)$	$\Omega_m$	$0.306^{+0.019}_{-0.018} \quad (-0.5\sigma)$	$z_{\text{drag}}$	$1060.07^{+0.71}_{-0.70} \quad (+0.6\sigma)$
$\tau$	$0.054^{+0.034}_{-0.043} \quad (+0.0\sigma)$	$\Omega_m h^2$	$0.1415^{+0.0029}_{-0.0029} \quad (-0.4\sigma)$	$r_{\text{drag}}$	$147.40^{+0.64}_{-0.64} \quad (+0.2\sigma)$
$A_L$	$1.14^{+0.16}_{-0.15} \quad (-0.1\sigma)$	$\Omega_m h^3$	$0.09625^{+0.00062}_{-0.00061} \quad (+0.4\sigma)$	$k_D$	$0.14063^{+0.00068}_{-0.00066} \quad (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.037^{+0.076}_{-0.082} \quad (-0.1\sigma)$	$\sigma_8$	$0.804^{+0.033}_{-0.032} \quad (-0.2\sigma)$	$100\theta_D$	$0.16067^{+0.00040}_{-0.00040} \quad (-0.6\sigma)$
$n_s$	$0.969^{+0.010}_{-0.010} \quad (+0.8\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.445^{+0.026}_{-0.026} \quad (-0.4\sigma)$	$z_{\text{eq}}$	$3367^{+69}_{-69} \quad (-0.4\sigma)$
$y_{\text{cal}}$	$0.9999^{+0.0048}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.598^{+0.029}_{-0.029} \quad (-0.3\sigma)$	$k_{\text{eq}}$	$0.01028^{+0.00021}_{-0.00021} \quad (-0.4\sigma)$
$A_{100}^{\text{PS}}$	$241^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.975^{+0.045}_{-0.044} \quad (-0.3\sigma)$	$100\theta_{\text{eq}}$	$0.820^{+0.013}_{-0.013} \quad (+0.5\sigma)$
$A_{143}^{\text{PS}}$	$37^{+10}_{-10} \quad (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.57^{+0.12}_{-0.12} \quad (-0.6\sigma)$	$100\theta_{\text{s,eq}}$	$0.4528^{+0.0069}_{-0.0067} \quad (+0.4\sigma)$
$A_{217}^{\text{PS}}$	$100^{+30}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$7.5^{+3.7}_{-4.5} \quad (-0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0719^{+0.0011}_{-0.0011} \quad (+0.5\sigma)$
$A_{217}^{\text{CIB}}$	$44^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.09^{+0.16}_{-0.17} \quad (-0.1\sigma)$	$H(0.57)$	$93.22^{+0.65}_{-0.62} \quad (+0.6\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.96 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.871^{+0.024}_{-0.024} \quad (-0.7\sigma)$	$D_A(0.57)$	$1382^{+19}_{-19} \quad (-0.5\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.24}_{-0.22}$	$D_{40}$	$1219^{+30}_{-29} \quad (-0.8\sigma)$	$F_{\text{AP}}(0.57)$	$0.6746^{+0.0049}_{-0.0048} \quad (-0.5\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5722^{+75}_{-77} \quad (-0.5\sigma)$	$f\sigma_8(0.57)$	$0.466^{+0.021}_{-0.021} \quad (-0.3\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2526^{+27}_{-27} \quad (-0.3\sigma)$	$\sigma_8(0.57)$	$0.599^{+0.023}_{-0.025} \quad (-0.1\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{1420}$	$813.3^{+9.3}_{-9.4} \quad (+0.1\sigma)$	$f_{2000}^{143}$	$27^{+5}_{-6} \quad (-0.5\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$D_{2000}$	$231.1^{+3.3}_{-3.3} \quad (+0.2\sigma)$	$f_{2000}^{217}$	$105.2^{+3.9}_{-3.9} \quad (+0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.22}_{-0.22}$	$n_{\text{s},0.002}$	$0.969^{+0.010}_{-0.010} \quad (+0.8\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+4}_{-4} \quad (-0.5\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$Y_{\text{P}}$	$0.24544^{+0.00016}_{-0.00016} \quad (+0.7\sigma)$	$\chi_{\text{lowEB}}^2$	$5431.7 \quad (\nu: 0.7) \quad (+0.0\sigma)$
$c_{100}$	$0.9969^{+0.0019}_{-0.0019} \quad (-1.7\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24677^{+0.00016}_{-0.00016} \quad (+0.7\sigma)$	$\chi_{\text{CamSpec}}^2$	$12951.7 \quad (\nu: 17.2)$
$c_{217}$	$0.9969^{+0.0035}_{-0.0035} \quad (+0.7\sigma)$	$10^5 D/H$	$2.572^{+0.067}_{-0.067} \quad (-0.7\sigma)$	$\chi_{\text{prior}}^2$	$8.7 \quad (\nu: 6.1) \quad (-1.9\sigma)$
$c_{TE}$	$1.0021^{+0.0092}_{-0.0092}$	$\text{Age/Gyr}$	$13.779^{+0.058}_{-0.059} \quad (-0.6\sigma)$	$\chi_{\text{CMB}}^2$	$18383.4 \quad (\nu: 17.9) \quad (+1553.1\sigma)$
$c_{EE}$	$1.0005^{+0.0083}_{-0.0082}$	$z_*$	$1089.65^{+0.65}_{-0.65} \quad (-0.6\sigma)$		
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_*$	$144.76^{+0.66}_{-0.66} \quad (+0.3\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18392.15; \Delta\bar{\chi}_{\text{eff}}^2 = 10492.46; R - 1 = 0.01144$$

### 3.34 base\_Alens\_plikHM\_TT\_tau07

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02258	$0.02252^{+0.00058}_{-0.00058}$	$\Omega_\Lambda$	0.6990	$0.697^{+0.031}_{-0.033}$	$r_*$	144.86	$144.8^{+1.1}_{-1.1}$
$\Omega_c h^2$	0.1177	$0.1180^{+0.0052}_{-0.0051}$	$\Omega_m$	0.3010	$0.303^{+0.033}_{-0.031}$	$100\theta_*$	1.04139	$1.0413^{+0.0010}_{-0.0010}$
$100\theta_{MC}$	1.04123	$1.0412^{+0.0011}_{-0.0011}$	$\Omega_m h^2$	0.14096	$0.1412^{+0.0048}_{-0.0047}$	$D_A/\text{Gpc}$	13.910	$13.909^{+0.098}_{-0.098}$
$\tau$	0.0722	$0.071^{+0.038}_{-0.040}$	$\Omega_m h^3$	0.09646	$0.09636^{+0.00098}_{-0.00096}$	$z_{\text{drag}}$	1060.28	$1060.1^{+1.1}_{-1.1}$
$A_L$	1.175	$1.16^{+0.21}_{-0.20}$	$\sigma_8$	0.8174	$0.817^{+0.036}_{-0.036}$	$r_{\text{drag}}$	147.46	$147.5^{+1.0}_{-1.0}$
$\ln(10^{10} A_s)$	3.075	$3.073^{+0.076}_{-0.080}$	$\sigma_8 \Omega_m^{0.5}$	0.4484	$0.450^{+0.038}_{-0.037}$	$k_D$	0.14064	$0.1406^{+0.0010}_{-0.0010}$
$n_s$	0.9717	$0.970^{+0.015}_{-0.015}$	$\sigma_8 \Omega_m^{0.25}$	0.6054	$0.606^{+0.038}_{-0.037}$	$100\theta_D$	0.16059	$0.16067^{+0.00062}_{-0.00059}$
$A_{217}^{\text{CIB}}$	60.8	$62^{+10}_{-10}$	$\sigma_8/h^{0.5}$	0.988	$0.989^{+0.055}_{-0.055}$	$z_{\text{eq}}$	3353	$3358^{+120}_{-110}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.57	—	$\langle d^2 \rangle^{1/2}$	2.650	$2.63^{+0.15}_{-0.15}$	$k_{\text{eq}}$	0.010234	$0.01025^{+0.00035}_{-0.00035}$
$A_{143}^{\text{tSZ}}$	6.93	$5.5^{+3.5}_{-3.8}$	$z_{\text{re}}$	9.32	$9.1^{+3.7}_{-3.8}$	$100\theta_{\text{eq}}$	0.8230	$0.822^{+0.023}_{-0.022}$
$A_{100}^{\text{PS}}$	241	$251^{+50}_{-50}$	$10^9 A_s$	2.165	$2.16^{+0.17}_{-0.17}$	$100\theta_{s,\text{eq}}$	0.4543	$0.454^{+0.012}_{-0.011}$
$A_{143}^{\text{PS}}$	42.1	$40^{+20}_{-20}$	$10^9 A_s e^{-2\tau}$	1.8737	$1.874^{+0.030}_{-0.030}$	$r_{\text{drag}}/D_V(0.57)$	0.07215	$0.0721^{+0.0019}_{-0.0018}$
$A_{143 \times 217}^{\text{PS}}$	45.7	$38^{+20}_{-20}$	$D_{40}$	1222.9	$1228^{+40}_{-38}$	$H(0.57)$	93.44	$93.4^{+1.2}_{-1.1}$
$A_{217}^{\text{PS}}$	103.9	$98^{+20}_{-20}$	$D_{220}$	5741	$5741^{+83}_{-81}$	$D_A(0.57)$	1376.0	$1378^{+33}_{-33}$
$A^{\text{kSZ}}$	0.02	$< 7.44$	$D_{810}$	2530.3	$2528^{+28}_{-27}$	$F_{\text{AP}}(0.57)$	0.6733	$0.6739^{+0.0084}_{-0.0080}$
$A_{100}^{\text{dustTT}}$	7.19	$7.4^{+3.7}_{-3.7}$	$D_{1420}$	815.0	$813.5^{+9.9}_{-9.8}$	$f\sigma_8(0.57)$	0.4725	$0.473^{+0.026}_{-0.026}$
$A_{143}^{\text{dustTT}}$	8.93	$8.9^{+3.7}_{-3.6}$	$D_{2000}$	232.52	$231.7^{+4.1}_{-4.1}$	$\sigma_8(0.57)$	0.6106	$0.610^{+0.024}_{-0.024}$
$A_{143 \times 217}^{\text{dustTT}}$	18.0	$16.8^{+8.2}_{-8.1}$	$n_{s,0.002}$	0.9717	$0.970^{+0.015}_{-0.015}$	$f_{2000}^{143}$	26.2	$28^{+7}_{-6}$
$A_{217}^{\text{dustTT}}$	82.8	$82^{+10}_{-10}$	$Y_P$	0.245486	$0.24546^{+0.00025}_{-0.00026}$	$f_{2000}^{143 \times 217}$	29.66	$30^{+5}_{-5}$
$c_{100}$	0.99802	$0.9979^{+0.0015}_{-0.0015}$	$Y_P^{\text{BBN}}$	0.246812	$0.24678^{+0.00026}_{-0.00026}$	$f_{2000}^{217}$	103.41	$104.2^{+4.6}_{-4.5}$
$c_{217}$	0.99553	$0.9956^{+0.0029}_{-0.0028}$	$10^5 \text{D/H}$	2.552	$2.56^{+0.11}_{-0.10}$	$\chi_{\text{plik}}^2$	760.3	$774.8 (\nu: 14.9)$
$y_{\text{cal}}$	1.00005	$1.0000^{+0.0049}_{-0.0048}$	Age/Gyr	13.757	$13.766^{+0.098}_{-0.10}$	$\chi_{\text{prior}}^2$	1.5	$8.1 (\nu: 6.9)$
$H_0$	68.44	$68.3^{+2.5}_{-2.4}$	$z_*$	1089.46	$1089.6^{+1.1}_{-1.1}$			

Best-fit  $\chi_{\text{eff}}^2 = 761.79$ ;  $\bar{\chi}_{\text{eff}}^2 = 782.92$ ;  $R - 1 = 0.00510$   
 $\chi_{\text{eff}}^2$ : CMB - plik\_dx11dr2\_HM\_v18\_TT: 760.32

### 3.35 base\_Alens\_plikHM\_TTTEE\_tau07

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022394	$0.02235^{+0.00035}_{-0.00034}$	$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.17}_{-0.17}$	$Y_P^{\text{BBN}}$	0.246730	$0.24671^{+0.00016}_{-0.00016}$
$\Omega_c h^2$	0.11889	$0.1192^{+0.0032}_{-0.0032}$	$A_{143}^{\text{dustTE}}$	0.154	$0.15^{+0.11}_{-0.10}$	$10^5 \text{D/H}$	2.587	$2.595^{+0.065}_{-0.066}$
$100\theta_{\text{MC}}$	1.04089	$1.04086^{+0.00067}_{-0.00065}$	$A_{143 \times 217}^{\text{dustTE}}$	0.334	$0.33^{+0.16}_{-0.16}$	Age/Gyr	13.792	$13.797^{+0.057}_{-0.058}$
$\tau$	0.0708	$0.070^{+0.039}_{-0.039}$	$A_{217}^{\text{dustTE}}$	1.65	$1.66^{+0.50}_{-0.50}$	$z_*$	1089.79	$1089.87^{+0.67}_{-0.66}$
$A_L$	1.117	$1.11^{+0.15}_{-0.14}$	$c_{100}$	0.99828	$0.9982^{+0.0015}_{-0.0015}$	$r_*$	144.70	$144.66^{+0.68}_{-0.68}$
$\ln(10^{10} A_s)$	3.075	$3.074^{+0.079}_{-0.079}$	$c_{217}$	0.99568	$0.9958^{+0.0028}_{-0.0028}$	$100\theta_*$	1.04106	$1.04105^{+0.00065}_{-0.00063}$
$n_s$	0.9672	$0.965^{+0.010}_{-0.010}$	$y_{\text{cal}}$	0.99987	$1.0001^{+0.0049}_{-0.0048}$	$D_A/\text{Gpc}$	13.899	$13.895^{+0.062}_{-0.062}$
$A_{217}^{\text{CIB}}$	62.0	$63^{+10}_{-10}$	$H_0$	67.75	$67.6^{+1.5}_{-1.4}$	$z_{\text{drag}}$	1059.89	$1059.84^{+0.68}_{-0.66}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.58	—	$\Omega_\Lambda$	0.6908	$0.689^{+0.019}_{-0.020}$	$r_{\text{drag}}$	147.36	$147.33^{+0.65}_{-0.65}$
$A_{143}^{\text{tSZ}}$	6.83	$5.5^{+3.6}_{-3.8}$	$\Omega_m$	0.3092	$0.311^{+0.020}_{-0.019}$	$k_D$	0.14060	$0.14060^{+0.00067}_{-0.00067}$
$A_{100}^{\text{PS}}$	249	$257^{+50}_{-50}$	$\Omega_m h^2$	0.14193	$0.1422^{+0.0030}_{-0.0030}$	$100\theta_D$	0.160755	$0.16080^{+0.00039}_{-0.00039}$
$A_{143}^{\text{PS}}$	45.3	$42^{+20}_{-20}$	$\Omega_m h^3$	0.09616	$0.09612^{+0.00060}_{-0.00060}$	$z_{\text{eq}}$	3376	$3382^{+71}_{-71}$
$A_{143 \times 217}^{\text{PS}}$	48.2	$40^{+20}_{-20}$	$\sigma_8$	0.8204	$0.821^{+0.034}_{-0.034}$	$k_{\text{eq}}$	0.010305	$0.01032^{+0.00022}_{-0.00022}$
$A_{217}^{\text{PS}}$	104.4	$98^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4562	$0.458^{+0.028}_{-0.027}$	$100\theta_{\text{eq}}$	0.8180	$0.817^{+0.014}_{-0.013}$
$A^{\text{kSZ}}$	0.00	$< 7.43$	$\sigma_8 \Omega_m^{0.25}$	0.6118	$0.613^{+0.030}_{-0.030}$	$100\theta_{\text{s,eq}}$	0.4518	$0.4512^{+0.0071}_{-0.0069}$
$A_{100}^{\text{dustTT}}$	7.27	$7.4^{+3.7}_{-3.7}$	$\sigma_8/h^{0.5}$	0.9968	$0.998^{+0.046}_{-0.046}$	$r_{\text{drag}}/D_V(0.57)$	0.07169	$0.0716^{+0.0011}_{-0.0011}$
$A_{143}^{\text{dustTT}}$	8.85	$8.9^{+3.6}_{-3.5}$	$\langle d^2 \rangle^{1/2}$	2.607	$2.60^{+0.11}_{-0.12}$	$H(0.57)$	93.09	$93.03^{+0.65}_{-0.62}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$16.7^{+8.2}_{-8.3}$	$z_{\text{re}}$	9.27	$9.1^{+3.7}_{-3.9}$	$D_A(0.57)$	1385.5	$1387^{+19}_{-20}$
$A_{217}^{\text{dustTT}}$	82.2	$81^{+10}_{-10}$	$10^9 A_s$	2.165	$2.17^{+0.18}_{-0.17}$	$F_{\text{AP}}(0.57)$	0.6754	$0.6759^{+0.0051}_{-0.0050}$
$A_{100}^{\text{dustEE}}$	0.0814	$0.081^{+0.011}_{-0.011}$	$10^9 A_s e^{-2\tau}$	1.8787	$1.880^{+0.025}_{-0.024}$	$f\sigma_8(0.57)$	0.4764	$0.477^{+0.022}_{-0.022}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0490	$0.0487^{+0.0097}_{-0.010}$	$D_{40}$	1232.0	$1238^{+33}_{-31}$	$\sigma_8(0.57)$	0.6109	$0.611^{+0.025}_{-0.024}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.099^{+0.064}_{-0.064}$	$D_{220}$	5737	$5741^{+76}_{-76}$	$f_{2000}^{143}$	27.5	$29^{+6}_{-6}$
$A_{143}^{\text{dustEE}}$	0.1002	$0.100^{+0.014}_{-0.014}$	$D_{810}$	2531.9	$2531^{+27}_{-27}$	$f_{2000}^{143 \times 217}$	30.90	$31^{+4}_{-4}$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.223^{+0.091}_{-0.091}$	$D_{1420}$	813.9	$813.0^{+9.6}_{-9.4}$	$f_{2000}^{217}$	104.34	$105.1^{+3.8}_{-3.8}$
$A_{217}^{\text{dustEE}}$	0.649	$0.65^{+0.25}_{-0.26}$	$D_{2000}$	231.32	$230.8^{+3.3}_{-3.2}$	$\chi_{\text{plik}}^2$	2429.2	$2448.9 (\nu: 22.0)$
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.074}_{-0.073}$	$n_{\text{s},0.002}$	0.9672	$0.965^{+0.010}_{-0.010}$	$\chi_{\text{prior}}^2$	6.5	$20 (\nu: 15.3)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.057}_{-0.057}$	$Y_P$	0.245403	$0.24538^{+0.00016}_{-0.00016}$			

Best-fit  $\chi_{\text{eff}}^2 = 2435.69$ ;  $\bar{\chi}_{\text{eff}}^2 = 2468.93$ ;  $R - 1 = 0.00687$

$\chi_{\text{eff}}^2$ : CMB - plik\_dx11dr2\_HM\_v18\_TTTEE: 2429.23

### 3.36 base\_Alens\_CamSpecHM\_TT\_tau07

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02254^{+0.00060}_{-0.00057} \quad (+0.1\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_*$	$144.9^{+1.1}_{-1.1} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1176^{+0.0052}_{-0.0052} \quad (-0.2\sigma)$	$H_0$	$68.5^{+2.5}_{-2.4} \quad (+0.2\sigma)$	$100\theta_*$	$1.0414^{+0.0010}_{-0.0010} \quad (+0.2\sigma)$
$100\theta_{MC}$	$1.0413^{+0.0011}_{-0.0010} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.699^{+0.031}_{-0.033} \quad (+0.2\sigma)$	$z_{drag}$	$1060.1^{+1.1}_{-1.1} \quad (+0.0\sigma)$
$\tau$	$0.071^{+0.038}_{-0.040} \quad (-0.0\sigma)$	$\Omega_m$	$0.301^{+0.033}_{-0.031} \quad (-0.2\sigma)$	$r_{drag}$	$147.5^{+1.0}_{-1.0} \quad (+0.2\sigma)$
$A_L$	$1.17^{+0.21}_{-0.19} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1408^{+0.0049}_{-0.0048} \quad (-0.2\sigma)$	$k_D$	$0.1405^{+0.0010}_{-0.0010} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.069^{+0.077}_{-0.081} \quad (-0.1\sigma)$	$\Omega_m h^3$	$0.09637^{+0.00096}_{-0.00095} \quad (+0.0\sigma)$	$100\theta_D$	$0.16064^{+0.00061}_{-0.00060} \quad (-0.1\sigma)$
$n_s$	$0.973^{+0.016}_{-0.015} \quad (+0.4\sigma)$	$\sigma_8$	$0.815^{+0.037}_{-0.038} \quad (-0.1\sigma)$	$z_{eq}$	$3348^{+120}_{-120} \quad (-0.2\sigma)$
$A_{100}^{PS}$	$238^{+40}_{-50} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.447^{+0.038}_{-0.038} \quad (-0.2\sigma)$	$100\theta_{eq}$	$0.824^{+0.023}_{-0.022} \quad (+0.2\sigma)$
$A_{143}^{PS}$	$35^{+20}_{-20} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.038}_{-0.038} \quad (-0.2\sigma)$	$r_{drag}/D_V(0.57)$	$0.0722^{+0.0019}_{-0.0018} \quad (+0.2\sigma)$
$A_{217}^{PS}$	$100^{+30}_{-30} \quad (+0.2\sigma)$	$\sigma_8/h^{0.5}$	$0.985^{+0.056}_{-0.056} \quad (-0.1\sigma)$	$H(0.57)$	$93.5^{+1.2}_{-1.1} \quad (+0.2\sigma)$
$A_{217}^{CIB}$	$43^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.63^{+0.15}_{-0.15} \quad (-0.1\sigma)$	$D_A(0.57)$	$1376^{+32}_{-34} \quad (-0.2\sigma)$
$A_{143}^{tSZ}$	$< 7.03 \quad (-1.0\sigma)$	$z_{re}$	$9.1^{+3.7}_{-3.9} \quad (-0.0\sigma)$	$F_{AP}(0.57)$	$0.6732^{+0.0083}_{-0.0081} \quad (-0.2\sigma)$
$r_{143 \times 217}^{PS}$	$0.53^{+0.24}_{-0.23}$	$10^9 A_s$	$2.15^{+0.17}_{-0.17} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.471^{+0.027}_{-0.027} \quad (-0.1\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.868^{+0.030}_{-0.030} \quad (-0.4\sigma)$	$\sigma_8(0.57)$	$0.609^{+0.025}_{-0.025} \quad (-0.1\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1217^{+40}_{-39} \quad (-0.5\sigma)$	$Y_P^{BBN}$	$0.24637^{+0.00025}_{-0.00025} \quad (-3.1\sigma)$
$A_{100}^{dust}$	$0.98^{+0.37}_{-0.37}$	$D_{220}$	$5719^{+82}_{-83} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$26^{+7}_{-7} \quad (-0.4\sigma)$
$A_{143}^{dust}$	$1.02^{+0.35}_{-0.36}$	$D_{810}$	$2524^{+27}_{-28} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$104.4^{+4.6}_{-4.6} \quad (+0.1\sigma)$
$A_{217}^{dust}$	$1.23^{+0.23}_{-0.23}$	$D_{1420}$	$813.4^{+9.9}_{-10} \quad (-0.0\sigma)$	$f_{2000}^{143 \times 217}$	$29^{+5}_{-5} \quad (-0.4\sigma)$
$A_{143 \times 217}^{dust}$	$0.97^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.973^{+0.016}_{-0.015} \quad (+0.4\sigma)$	$\chi_{CamSpec}^2$	$8057.5 \quad (\nu: 15.9)$
$y_{cal}$	$0.9999^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$Y_P$	$0.24505^{+0.00025}_{-0.00024} \quad (-3.1\sigma)$	$\chi_{prior}^2$	$9.3 \quad (\nu: 6.8) \quad (+0.3\sigma)$
$c_{100}$	$0.9969^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	Age/Gyr	$13.759^{+0.097}_{-0.10} \quad (-0.1\sigma)$		
$c_{217}$	$0.9968^{+0.0035}_{-0.0035} \quad (+0.8\sigma)$	$z_*$	$1089.5^{+1.1}_{-1.1} \quad (-0.2\sigma)$		

$$\bar{\chi}_{eff}^2 = 8066.84; \Delta \bar{\chi}_{eff}^2 = 7283.92; R - 1 = 0.00680$$

### 3.37 base\_Alens\_plikHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02233	$0.02233^{+0.00051}_{-0.00050}$	$\Omega_m$	0.3027	$0.302^{+0.030}_{-0.028}$	$D_A/\text{Gpc}$	13.928	$13.931^{+0.091}_{-0.092}$
$\Omega_c h^2$	0.11777	$0.1177^{+0.0047}_{-0.0047}$	$\Omega_m h^2$	0.14074	$0.1406^{+0.0044}_{-0.0044}$	$z_{\text{drag}}$	1059.67	$1059.7^{+1.0}_{-0.99}$
$100\theta_{\text{MC}}$	1.04115	$1.0412^{+0.0010}_{-0.0010}$	$\Omega_m h^3$	0.09597	$0.09594^{+0.00091}_{-0.00088}$	$r_{\text{drag}}$	147.73	$147.76^{+0.97}_{-0.97}$
$\tau$	0.0596	$0.058^{+0.039}_{-0.043}$	$\sigma_8$	0.8069	$0.805^{+0.036}_{-0.034}$	$k_D$	0.14016	$0.14012^{+0.00098}_{-0.00098}$
$A_L$	1.033	$1.04^{+0.12}_{-0.11}$	$\sigma_8 \Omega_m^{0.5}$	0.4439	$0.443^{+0.034}_{-0.033}$	$100\theta_D$	0.16092	$0.16094^{+0.00055}_{-0.00053}$
$\ln(10^{10} A_s)$	3.048	$3.045^{+0.080}_{-0.079}$	$\sigma_8 \Omega_m^{0.25}$	0.5985	$0.597^{+0.034}_{-0.034}$	$z_{\text{eq}}$	3348	$3345^{+110}_{-100}$
$n_s$	0.9699	$0.970^{+0.014}_{-0.013}$	$\sigma_8/h^{0.5}$	0.977	$0.975^{+0.050}_{-0.050}$	$k_{\text{eq}}$	0.010218	$0.01021^{+0.00032}_{-0.00032}$
$y_{\text{cal}}$	0.99994	$1.0000^{+0.0050}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.457	$2.457^{+0.058}_{-0.058}$	$100\theta_{\text{eq}}$	0.8232	$0.824^{+0.021}_{-0.020}$
$A_{217}^{\text{CIB}}$	67.3	$64^{+10}_{-10}$	$z_{\text{re}}$	8.18	$7.9^{+3.8}_{-4.4}$	$100\theta_{s,\text{eq}}$	0.4546	$0.455^{+0.011}_{-0.010}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.107	$2.10^{+0.17}_{-0.17}$	$r_{\text{drag}}/D_V(0.57)$	0.07209	$0.0721^{+0.0017}_{-0.0016}$
$A_{143}^{\text{tSZ}}$	7.23	$5.1^{+3.7}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8699	$1.870^{+0.029}_{-0.028}$	$H(0.57)$	93.23	$93.3^{+1.0}_{-0.95}$
$A_{100}^{\text{PS}}$	253	$259^{+50}_{-50}$	$D_{40}$	1218.1	$1219^{+35}_{-34}$	$D_A(0.57)$	1380.1	$1380^{+29}_{-30}$
$A_{143}^{\text{PS}}$	38.4	$43^{+20}_{-20}$	$D_{220}$	5718	$5720^{+82}_{-81}$	$F_{\text{AP}}(0.57)$	0.6738	$0.6737^{+0.0075}_{-0.0072}$
$A_{143 \times 217}^{\text{PS}}$	32	$38^{+20}_{-20}$	$D_{810}$	2530.5	$2530^{+28}_{-27}$	$f\sigma_8(0.57)$	0.4669	$0.466^{+0.024}_{-0.024}$
$A_{217}^{\text{PS}}$	96.8	$96^{+20}_{-20}$	$D_{1420}$	814.8	$815^{+10}_{-10}$	$\sigma_8(0.57)$	0.6024	$0.601^{+0.024}_{-0.025}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.37	$230.3^{+3.8}_{-3.7}$	$f_{2000}^{143}$	29.6	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.44	$7.5^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9699	$0.970^{+0.014}_{-0.013}$	$f_{2000}^{143 \times 217}$	32.29	$32^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.15	$9.1^{+3.6}_{-3.6}$	$Y_P$	0.245375	$0.24537^{+0.00023}_{-0.00023}$	$f_{2000}^{217}$	105.86	$106.0^{+4.1}_{-4.0}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.2}_{-8.2}$	$Y_P^{\text{BBN}}$	0.246701	$0.24670^{+0.00023}_{-0.00023}$	$\chi_{\text{lensing}}^2$	9.58	10.4 ( $\nu: 2.2$ )
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$10^5 D/H$	2.599	$2.600^{+0.096}_{-0.094}$	$\chi_{\text{lowTEB}}^2$	10494.28	10495.4 ( $\nu: 1.6$ )
$c_{100}$	0.99790	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.785	$13.784^{+0.087}_{-0.090}$	$\chi_{\text{plik}}^2$	766.1	779.7 ( $\nu: 16.0$ )
$c_{217}$	0.99597	$0.9959^{+0.0028}_{-0.0029}$	$z_*$	1089.78	$1089.77^{+0.98}_{-0.95}$	$\chi_{\text{prior}}^2$	2.1	7.4 ( $\nu: 6.5$ )
$H_0$	68.19	$68.2^{+2.2}_{-2.2}$	$r_*$	145.04	$145.1^{+1.0}_{-1.0}$	$\chi_{\text{CMB}}^2$	11269.9	11285.5 ( $\nu: 16.0$ )
$\Omega_\Lambda$	0.6973	$0.698^{+0.028}_{-0.030}$	$100\theta_*$	1.04134	$1.04135^{+0.00099}_{-0.00099}$			

Best-fit  $\chi_{\text{eff}}^2 = 11272.06$ ;  $\bar{\chi}_{\text{eff}}^2 = 11292.95$ ;  $R - 1 = 0.00683$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.58 lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.28 plik\_dx11dr2\_HM\_v18.TT: 766.06



### 3.38 base\_Alens\_plikHM\_TT\_lowTEB\_lensing\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022267	$0.02227^{+0.00040}_{-0.00040}$	$\Omega_m h^3$	0.09591	$0.09592^{+0.00089}_{-0.00087}$	$100\theta_D$	0.16097	$0.16098^{+0.00051}_{-0.00049}$
$\Omega_c h^2$	0.11838	$0.1184^{+0.0025}_{-0.0025}$	$\sigma_8$	0.8075	$0.808^{+0.033}_{-0.034}$	$z_{\text{eq}}$	3361	$3361^{+58}_{-58}$
$100\theta_{\text{MC}}$	1.04104	$1.04106^{+0.00082}_{-0.00083}$	$\sigma_8 \Omega_m^{0.5}$	0.4472	$0.447^{+0.024}_{-0.023}$	$k_{\text{eq}}$	0.010258	$0.01026^{+0.00018}_{-0.00018}$
$\tau$	0.0577	$0.058^{+0.039}_{-0.042}$	$\sigma_8 \Omega_m^{0.25}$	0.6009	$0.601^{+0.027}_{-0.027}$	$100\theta_{\text{eq}}$	0.8205	$0.821^{+0.011}_{-0.011}$
$A_L$	1.027	$1.03^{+0.10}_{-0.097}$	$\sigma_8/h^{0.5}$	0.9801	$0.980^{+0.043}_{-0.042}$	$100\theta_{\text{s,eq}}$	0.4532	$0.4533^{+0.0057}_{-0.0056}$
$\ln(10^{10} A_s)$	3.045	$3.045^{+0.079}_{-0.083}$	$\langle d^2 \rangle^{1/2}$	2.455	$2.456^{+0.056}_{-0.058}$	$r_{\text{drag}}/D_V(0.57)$	0.07187	$0.07188^{+0.00089}_{-0.00087}$
$n_s$	0.9685	$0.9681^{+0.0089}_{-0.0088}$	$z_{\text{re}}$	8.02	$7.9^{+3.8}_{-4.4}$	$H(0.57)$	93.09	$93.10^{+0.59}_{-0.56}$
$y_{\text{cal}}$	0.99977	$1.0001^{+0.0050}_{-0.0049}$	$10^9 A_s$	2.100	$2.10^{+0.17}_{-0.17}$	$D_A(0.57)$	1384.2	$1384^{+16}_{-16}$
$A_{217}^{\text{CIB}}$	67.6	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8715	$1.873^{+0.024}_{-0.022}$	$F_{\text{AP}}(0.57)$	0.67479	$0.6748^{+0.0040}_{-0.0039}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1219.9	$1223^{+28}_{-27}$	$f\sigma_8(0.57)$	0.4683	$0.468^{+0.021}_{-0.020}$
$A_{143}^{\text{tSZ}}$	7.19	$5.1^{+3.7}_{-3.7}$	$D_{220}$	5710	$5717^{+81}_{-78}$	$\sigma_8(0.57)$	0.6019	$0.602^{+0.024}_{-0.025}$
$A_{100}^{\text{PS}}$	255	$259^{+50}_{-50}$	$D_{810}$	2529.9	$2531^{+28}_{-27}$	$f_{2000}^{143}$	30.1	$30^{+6}_{-5}$
$A_{143}^{\text{PS}}$	39.4	$44^{+20}_{-20}$	$D_{1420}$	814.1	$814^{+10}_{-9.7}$	$f_{2000}^{143 \times 217}$	32.62	$33^{+4}_{-4}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{2000}$	230.01	$230.0^{+3.5}_{-3.4}$	$f_{2000}^{217}$	106.08	$106.2^{+3.8}_{-3.9}$
$A_{217}^{\text{PS}}$	96.7	$96^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9685	$0.9681^{+0.0089}_{-0.0088}$	$\chi_{\text{lensing}}^2$	9.57	10.4 ( $\nu$ : 2.1)
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.245347	$0.24535^{+0.00018}_{-0.00018}$	$\chi_{\text{lowTEB}}^2$	10494.51	10495.6 ( $\nu$ : 1.2)
$A_{100}^{\text{dustTT}}$	7.48	$7.4^{+3.6}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.246674	$0.24667^{+0.00018}_{-0.00018}$	$\chi_{\text{plik}}^2$	766.0	778.9 ( $\nu$ : 14.4)
$A_{143}^{\text{dustTT}}$	9.16	$9.1^{+3.5}_{-3.6}$	$10^5 \text{D}/\text{H}$	2.611	$2.611^{+0.076}_{-0.075}$	$\chi_{6\text{DF}}^2$	0.003	0.046 ( $\nu$ : 0.0)
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.2^{+8.2}_{-8.1}$	$\text{Age}/\text{Gyr}$	13.797	$13.796^{+0.058}_{-0.059}$	$\chi_{\text{MGS}}^2$	1.54	1.64 ( $\nu$ : 0.2)
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$z_*$	1089.91	$1089.90^{+0.63}_{-0.62}$	$\chi_{\text{DR11CMAS}}^2$	2.41	2.90 ( $\nu$ : 0.3)
$c_{100}$	0.99790	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.93	$144.94^{+0.62}_{-0.63}$	$\chi_{\text{DR11LOWZ}}^2$	0.37	0.50 ( $\nu$ : 0.1)
$c_{217}$	0.99602	$0.9960^{+0.0028}_{-0.0028}$	$100\theta_*$	1.04124	$1.04126^{+0.00081}_{-0.00082}$	$\chi_{\text{prior}}^2$	2.1	7.4 ( $\nu$ : 6.5)
$H_0$	67.88	$67.9^{+1.2}_{-1.2}$	$D_A/\text{Gpc}$	13.919	$13.919^{+0.061}_{-0.060}$	$\chi_{\text{CMB}}^2$	11270.0	11284.9 ( $\nu$ : 15.1)
$\Omega_\Lambda$	0.6934	$0.693^{+0.015}_{-0.016}$	$z_{\text{drag}}$	1059.59	$1059.58^{+0.89}_{-0.86}$	$\chi_{\text{BAO}}^2$	4.32	5.1 ( $\nu$ : 0.6)
$\Omega_m$	0.3066	$0.307^{+0.016}_{-0.015}$	$r_{\text{drag}}$	147.64	$147.64^{+0.66}_{-0.67}$			
$\Omega_m h^2$	0.14129	$0.1413^{+0.0024}_{-0.0024}$	$k_D$	0.14021	$0.14021^{+0.00084}_{-0.00083}$			

Best-fit  $\chi_{\text{eff}}^2 = 11276.49$ ;  $\bar{\chi}_{\text{eff}}^2 = 11297.40$ ;  $R - 1 = 0.00707$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.54 DR11CMAS: 2.41 DR11LOWZ: 0.37 CMB - smica\_g30\_ftl\_full\_pp: 9.57 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.51 plik\_dx11dr2\_HM\_v18\_TT: 765.96

### 3.39 base\_Alens\_plikHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022293	$0.02229^{+0.00033}_{-0.00031}$	$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.16}_{-0.16}$	Age/Gyr	13.801	$13.802^{+0.053}_{-0.055}$
$\Omega_c h^2$	0.11891	$0.1189^{+0.0030}_{-0.0030}$	$A_{143}^{\text{dustTE}}$	0.154	$0.15^{+0.11}_{-0.10}$	$z_*$	1089.92	$1089.93^{+0.61}_{-0.61}$
$100\theta_{\text{MC}}$	1.04090	$1.04090^{+0.00066}_{-0.00064}$	$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.16}_{-0.16}$	$r_*$	144.77	$144.78^{+0.65}_{-0.65}$
$\tau$	0.0576	$0.056^{+0.037}_{-0.043}$	$A_{217}^{\text{dustTE}}$	1.66	$1.66^{+0.50}_{-0.50}$	$100\theta_*$	1.04110	$1.04109^{+0.00064}_{-0.00063}$
$A_L$	1.022	$1.02^{+0.11}_{-0.11}$	$c_{100}$	0.99816	$0.9981^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.906	$13.906^{+0.060}_{-0.060}$
$\ln(10^{10} A_s)$	3.047	$3.044^{+0.080}_{-0.079}$	$c_{217}$	0.99605	$0.9961^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.67	$1059.67^{+0.64}_{-0.65}$
$n_s$	0.9665	$0.9660^{+0.0096}_{-0.0098}$	$H_0$	67.67	$67.7^{+1.4}_{-1.4}$	$r_{\text{drag}}$	147.47	$147.47^{+0.63}_{-0.63}$
$y_{\text{cal}}$	0.99992	$0.9999^{+0.0049}_{-0.0050}$	$\Omega_\Lambda$	0.6902	$0.690^{+0.018}_{-0.019}$	$k_D$	0.14041	$0.14040^{+0.00065}_{-0.00065}$
$A_{217}^{\text{CIB}}$	67.6	$65^{+10}_{-10}$	$\Omega_m$	0.3098	$0.310^{+0.019}_{-0.018}$	$100\theta_D$	0.160897	$0.16091^{+0.00036}_{-0.00036}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.03	—	$\Omega_m h^2$	0.14185	$0.1419^{+0.0028}_{-0.0028}$	$z_{\text{eq}}$	3374	$3374^{+68}_{-66}$
$A_{143}^{\text{tSZ}}$	7.32	$5.3^{+3.7}_{-3.8}$	$\Omega_m h^3$	0.09599	$0.09597^{+0.00060}_{-0.00058}$	$k_{\text{eq}}$	0.010299	$0.01030^{+0.00021}_{-0.00020}$
$A_{100}^{\text{PS}}$	257	$262^{+50}_{-50}$	$\sigma_8$	0.8093	$0.808^{+0.034}_{-0.033}$	$100\theta_{\text{eq}}$	0.8181	$0.818^{+0.013}_{-0.013}$
$A_{143}^{\text{PS}}$	38.8	$43^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4505	$0.450^{+0.026}_{-0.025}$	$100\theta_{s,\text{eq}}$	0.4519	$0.4520^{+0.0066}_{-0.0066}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6038	$0.603^{+0.029}_{-0.028}$	$r_{\text{drag}}/D_V(0.57)$	0.07167	$0.0717^{+0.0010}_{-0.0010}$
$A_{217}^{\text{PS}}$	96.8	$96^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9839	$0.982^{+0.045}_{-0.043}$	$H(0.57)$	93.02	$93.02^{+0.61}_{-0.58}$
$A^{\text{kSZ}}$	0.0	—	$\langle d^2 \rangle^{1/2}$	2.461	$2.461^{+0.056}_{-0.055}$	$D_A(0.57)$	1386.9	$1387^{+18}_{-18}$
$A_{100}^{\text{dustTT}}$	7.45	$7.5^{+3.7}_{-3.6}$	$z_{\text{re}}$	8.01	$7.7^{+3.8}_{-4.5}$	$F_{\text{AP}}(0.57)$	0.67559	$0.6756^{+0.0048}_{-0.0047}$
$A_{143}^{\text{dustTT}}$	9.06	$9.0^{+3.6}_{-3.6}$	$10^9 A_s$	2.105	$2.10^{+0.17}_{-0.17}$	$f\sigma_8(0.57)$	0.4701	$0.469^{+0.021}_{-0.021}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.2^{+8.0}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8760	$1.876^{+0.024}_{-0.025}$	$\sigma_8(0.57)$	0.6025	$0.601^{+0.024}_{-0.025}$
$A_{217}^{\text{dustTT}}$	81.7	$82^{+10}_{-10}$	$D_{40}$	1226.5	$1228^{+29}_{-29}$	$f_{2000}^{143}$	29.7	$30^{+5}_{-5}$
$A_{100}^{\text{dustEE}}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5724	$5725^{+76}_{-74}$	$f_{2000}^{143 \times 217}$	32.46	$33^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0491	$0.0491^{+0.0099}_{-0.0097}$	$D_{810}$	2532.8	$2532^{+27}_{-28}$	$f_{2000}^{217}$	105.98	$106.1^{+3.7}_{-3.7}$
$A_{100 \times 217}^{\text{dustEE}}$	0.098	$0.0999^{+0.064}_{-0.063}$	$D_{1420}$	814.6	$814.2^{+9.4}_{-9.5}$	$\chi^2_{\text{lensing}}$	10.22	$10.9 (\nu: 2.9)$
$A_{143}^{\text{dustEE}}$	0.1008	$0.100^{+0.013}_{-0.014}$	$D_{2000}$	230.13	$230.0^{+3.1}_{-3.1}$	$\chi^2_{\text{lowTEB}}$	10495.01	$10496.1 (\nu: 1.3)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.224^{+0.092}_{-0.092}$	$n_{s,0.002}$	0.9665	$0.9660^{+0.0096}_{-0.0098}$	$\chi^2_{\text{plik}}$	2434.6	$2453.4 (\nu: 23.3)$
$A_{217}^{\text{dustEE}}$	0.652	$0.65^{+0.25}_{-0.26}$	$Y_P$	0.245359	$0.24535^{+0.00015}_{-0.00015}$	$\chi^2_{\text{prior}}$	7.2	$19.6 (\nu: 14.9)$
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.074}_{-0.074}$	$Y_P^{\text{BBN}}$	0.246685	$0.24668^{+0.00015}_{-0.00015}$	$\chi^2_{\text{CMB}}$	12939.8	$12960.5 (\nu: 22.9)$
$A_{100 \times 143}^{\text{dustTE}}$	0.130	$0.132^{+0.056}_{-0.058}$	$10^5 \text{D}/\text{H}$	2.606	$2.607^{+0.060}_{-0.061}$			

Best-fit  $\chi^2_{\text{eff}} = 12947.00$ ;  $\bar{\chi}^2_{\text{eff}} = 12980.03$ ;  $R - 1 = 0.01280$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 10.22 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.01 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2434.59

### 3.40 base\_Alens\_plikHM\_TTTEE\_lowTEB\_lensing\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022295	$0.02230^{+0.00028}_{-0.00028}$	$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.9083	$13.909^{+0.047}_{-0.046}$
$\Omega_c h^2$	0.11879	$0.1188^{+0.0021}_{-0.0022}$	$A_{217}^{\text{dustTE}}$	1.66	$1.66^{+0.51}_{-0.50}$	$z_{\text{drag}}$	1059.67	$1059.68^{+0.60}_{-0.59}$
$100\theta_{\text{MC}}$	1.04092	$1.04092^{+0.00060}_{-0.00059}$	$c_{100}$	0.99815	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.496	$147.50^{+0.50}_{-0.49}$
$\tau$	0.0577	$0.056^{+0.037}_{-0.044}$	$c_{217}$	0.99606	$0.9960^{+0.0028}_{-0.0029}$	$k_D$	0.14038	$0.14038^{+0.00057}_{-0.00058}$
$A_L$	1.023	$1.03^{+0.10}_{-0.096}$	$H_0$	67.72	$67.73^{+0.99}_{-0.96}$	$100\theta_D$	0.160901	$0.16090^{+0.00034}_{-0.00034}$
$\ln(10^{10} A_s)$	3.047	$3.044^{+0.081}_{-0.085}$	$\Omega_\Lambda$	0.6909	$0.691^{+0.013}_{-0.013}$	$z_{\text{eq}}$	3371.5	$3371^{+48}_{-48}$
$n_s$	0.9666	$0.9664^{+0.0080}_{-0.0081}$	$\Omega_m$	0.3091	$0.309^{+0.013}_{-0.013}$	$k_{\text{eq}}$	0.010290	$0.01029^{+0.00015}_{-0.00015}$
$y_{\text{cal}}$	0.99996	$0.99997^{+0.0050}_{-0.0051}$	$\Omega_m h^2$	0.14173	$0.1417^{+0.0020}_{-0.0020}$	$100\theta_{\text{eq}}$	0.8186	$0.8188^{+0.0093}_{-0.0091}$
$A_{217}^{\text{CIB}}$	67.9	$64^{+10}_{-10}$	$\Omega_m h^3$	0.09598	$0.09598^{+0.00059}_{-0.00059}$	$100\theta_{s,\text{eq}}$	0.45221	$0.4523^{+0.0048}_{-0.0047}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$\sigma_8$	0.8090	$0.808^{+0.034}_{-0.034}$	$r_{\text{drag}}/D_V(0.57)$	0.07171	$0.07173^{+0.00073}_{-0.00072}$
$A_{143}^{\text{tSZ}}$	7.36	$5.3^{+3.7}_{-3.9}$	$\sigma_8 \Omega_m^{0.5}$	0.4498	$0.449^{+0.023}_{-0.022}$	$H(0.57)$	93.034	$93.04^{+0.45}_{-0.44}$
$A_{100}^{\text{PS}}$	256	$262^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6032	$0.602^{+0.028}_{-0.026}$	$D_A(0.57)$	1386.3	$1386^{+13}_{-13}$
$A_{143}^{\text{PS}}$	38.3	$43^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9831	$0.981^{+0.044}_{-0.041}$	$F_{\text{AP}}(0.57)$	0.67542	$0.6754^{+0.0033}_{-0.0033}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.461	$2.461^{+0.056}_{-0.055}$	$f\sigma_8(0.57)$	0.4698	$0.469^{+0.021}_{-0.020}$
$A_{217}^{\text{PS}}$	96.3	$96^{+20}_{-20}$	$z_{\text{re}}$	8.02	$7.7^{+3.9}_{-4.6}$	$\sigma_8(0.57)$	0.6024	$0.601^{+0.025}_{-0.025}$
$A^{\text{kSZ}}$	0.0	—	$10^9 A_s$	2.105	$2.10^{+0.17}_{-0.18}$	$f_{2000}^{143}$	29.7	$30^{+5}_{-5}$
$A_{100}^{\text{dustTT}}$	7.49	$7.5^{+3.7}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8755	$1.875^{+0.022}_{-0.022}$	$f_{2000}^{143 \times 217}$	32.51	$33^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.03	$9.1^{+3.6}_{-3.5}$	$D_{40}$	1226.3	$1227^{+27}_{-26}$	$f_{2000}^{217}$	106.02	$106.1^{+3.7}_{-3.6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.2^{+7.9}_{-8.4}$	$D_{220}$	5725	$5726^{+76}_{-75}$	$\chi_{\text{lensing}}^2$	10.16	$10.9 (\nu: 2.9)$
$A_{217}^{\text{dustTT}}$	81.7	$82^{+10}_{-10}$	$D_{810}$	2532.6	$2532^{+27}_{-28}$	$\chi_{\text{lowTEB}}^2$	10494.98	$10496.0 (\nu: 1.2)$
$A_{100}^{\text{dustEE}}$	0.0814	$0.082^{+0.011}_{-0.011}$	$D_{1420}$	814.5	$814.3^{+9.3}_{-9.6}$	$\chi_{\text{plik}}^2$	2434.7	$2453.1 (\nu: 23.2)$
$A_{100 \times 143}^{\text{dustEE}}$	0.0490	$0.0491^{+0.0099}_{-0.0097}$	$D_{2000}$	230.11	$230.0^{+3.1}_{-3.1}$	$\chi_{6\text{DF}}^2$	0.015	$0.045 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dustEE}}$	0.0996	$0.0996^{+0.064}_{-0.064}$	$n_{s,0.002}$	0.9666	$0.9664^{+0.0080}_{-0.0081}$	$\chi_{\text{MGS}}^2$	1.34	$1.42 (\nu: 0.1)$
$A_{143}^{\text{dustEE}}$	0.1005	$0.100^{+0.013}_{-0.013}$	$Y_P$	0.245360	$0.24536^{+0.00012}_{-0.00013}$	$\chi_{\text{DR11CMass}}^2$	2.42	$2.76 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dustEE}}$	0.223	$0.223^{+0.094}_{-0.091}$	$Y_P^{\text{BBN}}$	0.246686	$0.24669^{+0.00012}_{-0.00013}$	$\chi_{\text{DR11LOWZ}}^2$	0.54	$0.63 (\nu: 0.1)$
$A_{217}^{\text{dustEE}}$	0.656	$0.65^{+0.25}_{-0.26}$	$10^5 D/H$	2.605	$2.605^{+0.053}_{-0.053}$	$\chi_{\text{prior}}^2$	7.2	$19.6 (\nu: 14.8)$
$A_{100}^{\text{dustTE}}$	0.140	$0.141^{+0.074}_{-0.073}$	$\text{Age/Gyr}$	13.8000	$13.799^{+0.044}_{-0.043}$	$\chi_{\text{CMB}}^2$	12939.8	$12960.0 (\nu: 22.7)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.132^{+0.056}_{-0.058}$	$z_*$	1089.907	$1089.90^{+0.47}_{-0.47}$	$\chi_{\text{BAO}}^2$	4.32	$4.86 (\nu: 0.3)$
$A_{100 \times 217}^{\text{dustTE}}$	0.305	$0.30^{+0.16}_{-0.16}$	$r_*$	144.801	$144.81^{+0.49}_{-0.48}$			
$A_{143}^{\text{dustTE}}$	0.154	$0.15^{+0.11}_{-0.11}$	$100\theta_*$	1.04111	$1.04111^{+0.00059}_{-0.00058}$			

Best-fit  $\chi_{\text{eff}}^2 = 12951.33$ ;  $\bar{\chi}_{\text{eff}}^2 = 12984.50$ ;  $R - 1 = 0.01770$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.34 DR11CMass: 2.42 DR11LOWZ: 0.54 CMB - smica\_g30\_ftl\_full\_pp: 10.16 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.98

## 3.41 base\_Alens\_CamSpecHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02230	$0.02236^{+0.00051}_{-0.00052}$ $(+0.1\sigma)$	$H_0$	68.20	$68.4^{+2.3}_{-2.3}$ $(+0.1\sigma)$	$z_{\text{drag}}$	1059.59	$1059.7^{+1.0}_{-0.99}$ $(+0.1\sigma)$
$\Omega_c h^2$	0.11767	$0.1174^{+0.0049}_{-0.0047}$ $(-0.1\sigma)$	$\Omega_\Lambda$	0.6977	$0.699^{+0.028}_{-0.031}$ $(+0.1\sigma)$	$r_{\text{drag}}$	147.80	$147.8^{+1.0}_{-1.0}$ $(+0.1\sigma)$
$100\theta_{\text{MC}}$	1.04115	$1.0412^{+0.0010}_{-0.0010}$ $(+0.1\sigma)$	$\Omega_m$	0.3023	$0.301^{+0.031}_{-0.028}$ $(-0.1\sigma)$	$k_D$	0.14009	$0.1401^{+0.0010}_{-0.0010}$ $(+0.0\sigma)$
$\tau$	0.0600	$0.059^{+0.039}_{-0.044}$ $(+0.0\sigma)$	$\Omega_m h^2$	0.14061	$0.1404^{+0.0046}_{-0.0044}$ $(-0.1\sigma)$	$100\theta_D$	0.16095	$0.16089^{+0.00056}_{-0.00054}$ $(-0.2\sigma)$
$A_L$	1.036	$1.05^{+0.13}_{-0.12}$ $(+0.2\sigma)$	$\Omega_m h^3$	0.09589	$0.09600^{+0.00092}_{-0.00090}$ $(+0.1\sigma)$	$z_{\text{eq}}$	3345	$3341^{+110}_{-110}$ $(-0.1\sigma)$
$\ln(10^{10} A_s)$	3.046	$3.043^{+0.081}_{-0.081}$ $(-0.0\sigma)$	$\sigma_8$	0.8064	$0.805^{+0.036}_{-0.035}$ $(-0.0\sigma)$	$100\theta_{\text{eq}}$	0.8237	$0.825^{+0.021}_{-0.021}$ $(+0.1\sigma)$
$n_s$	0.9705	$0.972^{+0.014}_{-0.014}$ $(+0.3\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4434	$0.441^{+0.035}_{-0.033}$ $(-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	0.07212	$0.0722^{+0.0017}_{-0.0017}$ $(+0.1\sigma)$
$y_{\text{cal}}$	1.0001	$0.9999^{+0.0051}_{-0.0052}$ $(-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.5979	$0.596^{+0.035}_{-0.034}$ $(-0.1\sigma)$	$H(0.57)$	93.21	$93.3^{+1.0}_{-0.99}$ $(+0.1\sigma)$
$A_{100}^{\text{PS}}$	250.9	$245^{+40}_{-40}$ $(-0.5\sigma)$	$\sigma_8/h^{0.5}$	0.976	$0.973^{+0.051}_{-0.051}$ $(-0.1\sigma)$	$D_A(0.57)$	1380.1	$1378^{+31}_{-30}$ $(-0.1\sigma)$
$A_{143}^{\text{PS}}$	35.0	$38^{+20}_{-20}$ $(-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	2.456	$2.458^{+0.058}_{-0.058}$ $(+0.0\sigma)$	$F_{\text{AP}}(0.57)$	0.6737	$0.6733^{+0.0079}_{-0.0073}$ $(-0.1\sigma)$
$A_{217}^{\text{PS}}$	94.5	$97^{+30}_{-30}$ $(+0.1\sigma)$	$z_{\text{re}}$	8.23	$7.9^{+4.0}_{-4.4}$ $(+0.0\sigma)$	$f\sigma_8(0.57)$	0.4665	$0.465^{+0.025}_{-0.024}$ $(-0.1\sigma)$
$A_{217}^{\text{CIB}}$	47.4	$46^{+10}_{-10}$ $(-2.7\sigma)$	$10^9 A_s$	2.103	$2.10^{+0.17}_{-0.18}$ $(-0.0\sigma)$	$\sigma_8(0.57)$	0.6021	$0.601^{+0.025}_{-0.024}$ $(-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	2.84	$< 6.64$ $(-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	1.8657	$1.865^{+0.029}_{-0.029}$ $(-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	0.246270	$0.24630^{+0.00022}_{-0.00023}$ $(-3.4\sigma)$
$r_{143 \times 217}^{\text{PS}}$	0.397	$0.51^{+0.23}_{-0.21}$	$D_{40}$	1214.1	$1211^{+35}_{-34}$ $(-0.5\sigma)$	$f_{2000}^{143}$	29.7	$29^{+6}_{-6}$ $(-0.5\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{220}$	5702	$5700^{+84}_{-83}$ $(-0.5\sigma)$	$f_{2000}^{217}$	107.02	$106.2^{+4.1}_{-4.1}$ $(+0.1\sigma)$
$A^{\text{kSZ}}$	6.2	—	$D_{810}$	2525.9	$2526^{+28}_{-28}$ $(-0.3\sigma)$	$f_{2000}^{143 \times 217}$	32.14	$32^{+4}_{-4}$ $(-0.4\sigma)$
$A_{100}^{\text{dust}}$	0.993	$0.996^{+0.38}_{-0.38}$	$D_{1420}$	813.5	$814^{+10}_{-10}$ $(-0.0\sigma)$	$\chi_{\text{lensing}}^2$	9.25	$10.4 (\nu: 2.1)$ $(-0.0\sigma)$
$A_{143}^{\text{dust}}$	1.028	$1.03^{+0.35}_{-0.36}$	$n_{\text{s},0.002}$	0.9705	$0.972^{+0.014}_{-0.014}$ $(+0.3\sigma)$	$\chi_{\text{lowTEB}}^2$	10494.01	$10494.9 (\nu: 1.4)$ $(-0.3\sigma)$
$A_{217}^{\text{dust}}$	1.224	$1.22^{+0.23}_{-0.23}$	$Y_{\text{P}}$	0.244939	$0.24497^{+0.00022}_{-0.00022}$ $(-3.5\sigma)$	$\chi_{\text{CamSpec}}^2$	8046.8	$8061.6 (\nu: 17.2)$
$A_{143 \times 217}^{\text{dust}}$	0.951	$0.98^{+0.35}_{-0.35}$	Age/Gyr	13.788	$13.778^{+0.091}_{-0.091}$ $(-0.1\sigma)$	$\chi_{\text{prior}}^2$	3.8	$8.5 (\nu: 6.1)$ $(+0.3\sigma)$
$c_{100}$	0.99664	$0.9968^{+0.0019}_{-0.0018}$ $(-1.4\sigma)$	$z_*$	1089.79	$1089.7^{+1.0}_{-0.96}$ $(-0.2\sigma)$	$\chi_{\text{CMB}}^2$	18550.0	$18566.9 (\nu: 17.3)$ $(+1288.8\sigma)$
$c_{217}$	0.99755	$0.9972^{+0.0035}_{-0.0035}$ $(+0.9\sigma)$	$r_*$	145.10	$145.1^{+1.0}_{-1.0}$ $(+0.1\sigma)$			
$\beta_1^1$	-0.15	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	1.04136	$1.04143^{+0.00098}_{-0.00096}$ $(+0.2\sigma)$			

Best-fit  $\chi_{\text{eff}}^2 = 18553.83$ ;  $\Delta\chi_{\text{eff}}^2 = 7281.77$ ;  $\bar{\chi}_{\text{eff}}^2 = 18575.39$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7282.44$ ;  $R - 1 = 0.00680$  $\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.25 ( $\Delta$  -0.33) low1\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.01 ( $\Delta$  -0.27) CamSpec like-v9.10CMH\_unified: 8046.75

### 3.42 base\_Alens\_CamSpecHM\_TT\_lowTEB\_lensing\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02229^{+0.00040}_{-0.00041} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.694^{+0.015}_{-0.016} \quad (+0.1\sigma)$	$k_D$	$0.14024^{+0.00086}_{-0.00084} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1183^{+0.0026}_{-0.0025} \quad (-0.0\sigma)$	$\Omega_m$	$0.306^{+0.016}_{-0.015} \quad (-0.1\sigma)$	$100\theta_D$	$0.16094^{+0.00052}_{-0.00050} \quad (-0.1\sigma)$
$100\theta_{MC}$	$1.04110^{+0.00085}_{-0.00079} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1412^{+0.0025}_{-0.0024} \quad (-0.0\sigma)$	$z_{eq}$	$3359^{+60}_{-58} \quad (-0.0\sigma)$
$\tau$	$0.057^{+0.038}_{-0.043} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.09596^{+0.00090}_{-0.00088} \quad (+0.1\sigma)$	$100\theta_{eq}$	$0.821^{+0.011}_{-0.011} \quad (+0.1\sigma)$
$A_L$	$1.04^{+0.11}_{-0.10} \quad (+0.2\sigma)$	$\sigma_8$	$0.807^{+0.034}_{-0.033} \quad (-0.0\sigma)$	$r_{drag}/D_V(0.57)$	$0.07192^{+0.00089}_{-0.00087} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.043^{+0.079}_{-0.080} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.024}_{-0.023} \quad (-0.1\sigma)$	$H(0.57)$	$93.13^{+0.59}_{-0.57} \quad (+0.1\sigma)$
$n_s$	$0.9701^{+0.0090}_{-0.0090} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.028}_{-0.027} \quad (-0.0\sigma)$	$D_A(0.57)$	$1383^{+16}_{-16} \quad (-0.1\sigma)$
$y_{cal}$	$0.99996^{+0.0051}_{-0.0052} \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.979^{+0.044}_{-0.043} \quad (-0.0\sigma)$	$F_{AP}(0.57)$	$0.6746^{+0.0040}_{-0.0039} \quad (-0.1\sigma)$
$A_{100}^{PS}$	$247^{+40}_{-40} \quad (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.456^{+0.057}_{-0.056} \quad (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.468^{+0.021}_{-0.020} \quad (-0.0\sigma)$
$A_{143}^{PS}$	$39^{+10}_{-10} \quad (-0.6\sigma)$	$z_{re}$	$7.9^{+3.9}_{-4.4} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.602^{+0.024}_{-0.024} \quad (-0.0\sigma)$
$A_{217}^{PS}$	$97^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s$	$2.10^{+0.17}_{-0.17} \quad (-0.1\sigma)$	$Y_P^{BBN}$	$0.24627^{+0.00017}_{-0.00018} \quad (-4.4\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.868^{+0.023}_{-0.024} \quad (-0.4\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$A_{143}^{tSZ}$	$< 6.58 \quad (-1.0\sigma)$	$D_{40}$	$1215^{+29}_{-28} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.4^{+4.0}_{-3.8} \quad (+0.1\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.22}_{-0.22}$	$D_{220}$	$5696^{+83}_{-82} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.4\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{810}$	$2527^{+28}_{-28} \quad (-0.3\sigma)$	$\chi_{lensing}^2$	$10.4 \quad (\nu: 2.0) \quad (-0.0\sigma)$
$A^{kSZ}$	—	$D_{1420}$	$814^{+10}_{-9.9} \quad (-0.0\sigma)$	$\chi_{lowTEB}^2$	$10495.1 \quad (\nu: 1.1) \quad (-0.3\sigma)$
$A_{100}^{dust}$	$0.99^{+0.37}_{-0.38}$	$n_{s,0.002}$	$0.9701^{+0.0090}_{-0.0090} \quad (+0.4\sigma)$	$\chi_{CamSpec}^2$	$8060.8 \quad (\nu: 16.0)$
$A_{143}^{dust}$	$1.03^{+0.35}_{-0.36}$	$Y_P$	$0.24494^{+0.00018}_{-0.00017} \quad (-4.4\sigma)$	$\chi_{6DF}^2$	$0.046 \quad (\nu: 0.0) \quad (+0.0\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$Age/Gyr$	$13.793^{+0.060}_{-0.060} \quad (-0.1\sigma)$	$\chi_{MGS}^2$	$1.68 \quad (\nu: 0.2) \quad (+0.1\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.34}_{-0.35}$	$z_*$	$1089.86^{+0.64}_{-0.62} \quad (-0.1\sigma)$	$\chi_{DR11CMass}^2$	$2.93 \quad (\nu: 0.3) \quad (+0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$r_*$	$144.94^{+0.62}_{-0.64} \quad (+0.0\sigma)$	$\chi_{DR11LOWZ}^2$	$0.47 \quad (\nu: 0.1) \quad (-0.1\sigma)$
$c_{217}$	$0.9972^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$100\theta_*$	$1.04131^{+0.00084}_{-0.00078} \quad (+0.1\sigma)$	$\chi_{prior}^2$	$8.5 \quad (\nu: 6.1) \quad (+0.3\sigma)$
$\beta_1^1$	$0.0^{+2.0}_{-2.0}$	$z_{drag}$	$1059.61^{+0.87}_{-0.87} \quad (+0.1\sigma)$	$\chi_{CMB}^2$	$18566.3 \quad (\nu: 16.7) \quad (+1326.1\sigma)$
$H_0$	$68.0^{+1.2}_{-1.2} \quad (+0.1\sigma)$	$r_{drag}$	$147.64^{+0.66}_{-0.68} \quad (-0.0\sigma)$	$\chi_{BAO}^2$	$5.1 \quad (\nu: 0.6) \quad (+0.0\sigma)$

$$\bar{\chi}_{eff}^2 = 18579.96; \Delta\bar{\chi}_{eff}^2 = 7282.56; R - 1 = 0.01399$$

### 3.43 base\_Alens\_CamSpecHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022369	$0.02239^{+0.00033}_{-0.00032}$ $(+0.6\sigma)$	$\mathcal{C}_{EE}$	1.0014	$1.0014^{+0.0082}_{-0.0082}$	$r_*$	144.82	$144.85^{+0.64}_{-0.65}$ $(+0.2\sigma)$
$\Omega_c h^2$	0.11850	$0.1184^{+0.0030}_{-0.0030}$ $(-0.4\sigma)$	$\beta_1^1$	-0.06	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	1.04111	$1.04113^{+0.00061}_{-0.00062}$ $(+0.1\sigma)$
$100\theta_{MC}$	1.04092	$1.04094^{+0.00062}_{-0.00063}$ $(+0.1\sigma)$	$H_0$	67.88	$68.0^{+1.4}_{-1.4}$ $(+0.4\sigma)$	$z_{drag}$	1059.82	$1059.85^{+0.66}_{-0.63}$ $(+0.6\sigma)$
$\tau$	0.0580	$0.057^{+0.038}_{-0.042}$ $(+0.1\sigma)$	$\Omega_\Lambda$	0.6929	$0.694^{+0.018}_{-0.019}$ $(+0.4\sigma)$	$r_{drag}$	147.49	$147.51^{+0.63}_{-0.62}$ $(+0.1\sigma)$
$A_L$	1.026	$1.03^{+0.10}_{-0.098}$ $(+0.1\sigma)$	$\Omega_m$	0.3071	$0.306^{+0.019}_{-0.018}$ $(-0.4\sigma)$	$k_D$	0.14046	$0.14046^{+0.00064}_{-0.00065}$ $(+0.2\sigma)$
$\ln(10^{10} A_s)$	3.045	$3.042^{+0.078}_{-0.082}$ $(-0.0\sigma)$	$\Omega_m h^2$	0.14151	$0.1414^{+0.0028}_{-0.0028}$ $(-0.3\sigma)$	$100\theta_D$	0.160790	$0.16077^{+0.00037}_{-0.00037}$ $(-0.7\sigma)$
$n_s$	0.9685	$0.9694^{+0.0096}_{-0.0095}$ $(+0.7\sigma)$	$\Omega_m h^3$	0.09606	$0.09608^{+0.00059}_{-0.00059}$ $(+0.4\sigma)$	$z_{eq}$	3366	$3363^{+67}_{-66}$ $(-0.3\sigma)$
$y_{cal}$	1.00011	$0.9999^{+0.0050}_{-0.0048}$ $(-0.0\sigma)$	$\sigma_8$	0.8074	$0.806^{+0.033}_{-0.034}$ $(-0.1\sigma)$	$100\theta_{eq}$	0.8198	$0.820^{+0.013}_{-0.013}$ $(+0.4\sigma)$
$A_{100}^{PS}$	247.3	$245^{+40}_{-40}$ $(-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4474	$0.446^{+0.025}_{-0.024}$ $(-0.3\sigma)$	$r_{drag}/D_V(0.57)$	0.07181	$0.0719^{+0.0010}_{-0.0010}$ $(+0.4\sigma)$
$A_{143}^{PS}$	35.0	$38^{+10}_{-10}$ $(-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.6011	$0.600^{+0.028}_{-0.027}$ $(-0.2\sigma)$	$H(0.57)$	93.12	$93.16^{+0.61}_{-0.58}$ $(+0.5\sigma)$
$A_{217}^{PS}$	96.0	$98^{+30}_{-30}$ $(+0.1\sigma)$	$\sigma_8/h^{0.5}$	0.9800	$0.978^{+0.043}_{-0.042}$ $(-0.2\sigma)$	$D_A(0.57)$	1384.0	$1383^{+18}_{-18}$ $(-0.4\sigma)$
$A_{217}^{CIB}$	47.6	$46^{+10}_{-10}$ $(-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	2.454	$2.454^{+0.054}_{-0.054}$ $(-0.2\sigma)$	$F_{AP}(0.57)$	0.67491	$0.6747^{+0.0047}_{-0.0046}$ $(-0.4\sigma)$
$A_{143}^{tSZ}$	3.67	$< 6.80$ $(-1.0\sigma)$	$z_{re}$	8.03	$7.8^{+3.8}_{-4.4}$ $(+0.0\sigma)$	$f\sigma_8(0.57)$	0.4683	$0.467^{+0.021}_{-0.020}$ $(-0.2\sigma)$
$r_{143 \times 217}^{PS}$	0.419	$0.51^{+0.23}_{-0.21}$	$10^9 A_s$	2.100	$2.10^{+0.17}_{-0.17}$ $(-0.0\sigma)$	$\sigma_8(0.57)$	0.6017	$0.601^{+0.024}_{-0.025}$ $(-0.0\sigma)$
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8700	$1.869^{+0.024}_{-0.023}$ $(-0.6\sigma)$	$Y_P^{BBN}$	0.246302	$0.24631^{+0.00014}_{-0.00014}$ $(-4.9\sigma)$
$A^{kSZ}$	4.7	—	$D_{40}$	1219.2	$1218^{+28}_{-27}$ $(-0.7\sigma)$	$f_{2000}^{143}$	29.1	$29^{+5}_{-5}$ $(-0.5\sigma)$
$A_{100}^{dust}$	0.987	$0.99^{+0.38}_{-0.37}$	$D_{220}$	5711	$5708^{+77}_{-75}$ $(-0.4\sigma)$	$f_{2000}^{217}$	106.46	$106.1^{+3.7}_{-3.7}$ $(-0.0\sigma)$
$A_{143}^{dust}$	1.031	$1.03^{+0.36}_{-0.36}$	$D_{810}$	2528.0	$2527^{+27}_{-26}$ $(-0.3\sigma)$	$f_{2000}^{143 \times 217}$	31.60	$31^{+4}_{-4}$ $(-0.6\sigma)$
$A_{217}^{dust}$	1.218	$1.21^{+0.23}_{-0.23}$	$D_{1420}$	814.2	$814.4^{+9.4}_{-9.1}$ $(+0.0\sigma)$	$\chi_{lensing}^2$	9.55	$10.4 (\nu: 2.0)$ $(-0.2\sigma)$
$A_{143 \times 217}^{dust}$	0.989	$0.99^{+0.35}_{-0.35}$	$n_{s,0.002}$	0.9685	$0.9694^{+0.0096}_{-0.0095}$ $(+0.7\sigma)$	$\chi_{lowTEB}^2$	10494.41	$10495.3 (\nu: 1.2)$ $(-0.5\sigma)$
$c_{100}$	0.99668	$0.9968^{+0.0019}_{-0.0019}$ $(-1.8\sigma)$	$Y_P$	0.244971	$0.24498^{+0.00015}_{-0.00014}$ $(-5.0\sigma)$	$\chi_{CamSpec}^2$	12937.5	$12953.9 (\nu: 18.5)$
$c_{217}$	0.99726	$0.9971^{+0.0035}_{-0.0035}$ $(+0.7\sigma)$	Age/Gyr	13.791	$13.788^{+0.054}_{-0.055}$ $(-0.5\sigma)$	$\chi_{prior}^2$	3.8	$9.0 (\nu: 6.3)$ $(-1.9\sigma)$
$c_{TE}$	1.0049	$1.0049^{+0.0087}_{-0.0086}$	$z_*$	1089.77	$1089.73^{+0.62}_{-0.61}$ $(-0.6\sigma)$	$\chi_{CMB}^2$	23441.4	$23459.5 (\nu: 18.7)$ $(+1552.9\sigma)$

Best-fit  $\chi_{eff}^2 = 23445.21$ ;  $\Delta\chi_{eff}^2 = 10498.21$ ;  $\bar{\chi}_{eff}^2 = 23468.58$ ;  $\Delta\bar{\chi}_{eff}^2 = 10488.55$ ;  $R - 1 = 0.00725$

$\chi_{eff}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.55 ( $\Delta$  -0.67) lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.41 ( $\Delta$  -0.60) CamSpec like\_v9.10CMH\_unified: 12937.47

### 3.44 base\_Alens\_CamSpecHM\_TTTEEE\_lowTEB\_lensing\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00029}_{-0.00028} \quad (+0.6\sigma)$	$H_0$	$67.90^{+0.98}_{-0.97} \quad (+0.3\sigma)$	$k_D$	$0.14047^{+0.00059}_{-0.00058} \quad (+0.3\sigma)$
$\Omega_c h^2$	$0.1185^{+0.0021}_{-0.0021} \quad (-0.3\sigma)$	$\Omega_\Lambda$	$0.693^{+0.013}_{-0.013} \quad (+0.3\sigma)$	$100\theta_D$	$0.16078^{+0.00034}_{-0.00035} \quad (-0.7\sigma)$
$100\theta_{MC}$	$1.04093^{+0.00057}_{-0.00057} \quad (+0.0\sigma)$	$\Omega_m$	$0.307^{+0.013}_{-0.013} \quad (-0.3\sigma)$	$z_{eq}$	$3366^{+47}_{-47} \quad (-0.2\sigma)$
$\tau$	$0.057^{+0.038}_{-0.042} \quad (+0.0\sigma)$	$\Omega_m h^2$	$0.1415^{+0.0020}_{-0.0020} \quad (-0.2\sigma)$	$100\theta_{eq}$	$0.8199^{+0.0092}_{-0.0090} \quad (+0.2\sigma)$
$A_L$	$1.03^{+0.10}_{-0.094} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.09608^{+0.00059}_{-0.00058} \quad (+0.4\sigma)$	$r_{drag}/D_V(0.57)$	$0.07183^{+0.00074}_{-0.00071} \quad (+0.3\sigma)$
$\ln(10^{10} A_s)$	$3.042^{+0.078}_{-0.077} \quad (-0.0\sigma)$	$\sigma_8$	$0.807^{+0.033}_{-0.034} \quad (-0.1\sigma)$	$H(0.57)$	$93.14^{+0.46}_{-0.44} \quad (+0.4\sigma)$
$n_s$	$0.9691^{+0.0080}_{-0.0079} \quad (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.447^{+0.022}_{-0.021} \quad (-0.2\sigma)$	$D_A(0.57)$	$1384^{+13}_{-13} \quad (-0.4\sigma)$
$y_{cal}$	$0.9999^{+0.0049}_{-0.0048} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.026}_{-0.025} \quad (-0.1\sigma)$	$F_{AP}(0.57)$	$0.6749^{+0.0033}_{-0.0033} \quad (-0.3\sigma)$
$A_{100}^{PS}$	$245^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.979^{+0.042}_{-0.040} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.468^{+0.020}_{-0.019} \quad (-0.1\sigma)$
$A_{143}^{PS}$	$38^{+10}_{-10} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.454^{+0.054}_{-0.055} \quad (-0.3\sigma)$	$\sigma_8(0.57)$	$0.601^{+0.024}_{-0.025} \quad (-0.0\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$z_{re}$	$7.8^{+3.9}_{-4.3} \quad (+0.0\sigma)$	$Y_P^{BBN}$	$0.24631^{+0.00012}_{-0.00012} \quad (-5.8\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.10^{+0.16}_{-0.17} \quad (-0.0\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$A_{143}^{tSZ}$	$< 6.81 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.022}_{-0.022} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.1^{+3.6}_{-3.6} \quad (+0.0\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.23}_{-0.21}$	$D_{40}$	$1218^{+26}_{-25} \quad (-0.7\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{220}$	$5707^{+76}_{-74} \quad (-0.5\sigma)$	$\chi_{lensing}^2$	$10.4 \quad (\nu: 1.9) \quad (-0.2\sigma)$
$A^{kSZ}$	—	$D_{810}$	$2528^{+27}_{-26} \quad (-0.3\sigma)$	$\chi_{lowTEB}^2$	$10495.3 \quad (\nu: 1.1) \quad (-0.5\sigma)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$D_{1420}$	$814.3^{+9.3}_{-9.2} \quad (+0.0\sigma)$	$\chi_{CamSpec}^2$	$12953.4 \quad (\nu: 17.6)$
$A_{143}^{dust}$	$1.03^{+0.36}_{-0.36}$	$n_{s,0.002}$	$0.9691^{+0.0080}_{-0.0079} \quad (+0.6\sigma)$	$\chi_{6DF}^2$	$0.035 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$Y_P$	$0.24498^{+0.00013}_{-0.00012} \quad (-5.9\sigma)$	$\chi_{MGS}^2$	$1.56 \quad (\nu: 0.1) \quad (+0.3\sigma)$
$A_{143 \times 217}^{dust}$	$0.99^{+0.35}_{-0.35}$	$Age/Gyr$	$13.790^{+0.044}_{-0.044} \quad (-0.4\sigma)$	$\chi_{DR11CMass}^2$	$2.75 \quad (\nu: 0.1) \quad (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.76^{+0.48}_{-0.48} \quad (-0.6\sigma)$	$\chi_{DR11LOWZ}^2$	$0.51 \quad (\nu: 0.1) \quad (-0.2\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0035} \quad (+0.7\sigma)$	$r_*$	$144.82^{+0.49}_{-0.49} \quad (+0.1\sigma)$	$\chi_{prior}^2$	$9.1 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{TE}$	$1.0050^{+0.0087}_{-0.0085}$	$100\theta_*$	$1.04112^{+0.00056}_{-0.00057} \quad (+0.1\sigma)$	$\chi_{CMB}^2$	$23459.1 \quad (\nu: 18.1) \quad (+1556.6\sigma)$
$c_{EE}$	$1.0014^{+0.0082}_{-0.0082}$	$z_{drag}$	$1059.83^{+0.60}_{-0.57} \quad (+0.5\sigma)$	$\chi_{BAO}^2$	$4.86 \quad (\nu: 0.3) \quad (-0.0\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_{drag}$	$147.49^{+0.50}_{-0.50} \quad (-0.1\sigma)$		

$$\bar{\chi}_{eff}^2 = 23473.00; \Delta\bar{\chi}_{eff}^2 = 10488.50; R - 1 = 0.00768$$

### 3.45 base\_Alens\_CamSpecDS\_TT\_lowTEB

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02254^{+0.00055}_{-0.00053} \quad (-0.3\sigma)$	$\beta_1^1$	$0.0^{+2.0}_{-2.0}$	$r_*$	$145.0^{+1.0}_{-1.0} \quad (-0.2\sigma)$
$\Omega_c h^2$	$0.1174^{+0.0049}_{-0.0047} \quad (+0.3\sigma)$	$H_0$	$68.6^{+2.3}_{-2.3} \quad (-0.3\sigma)$	$100\theta_*$	$1.04144^{+0.00094}_{-0.00096} \quad (-0.2\sigma)$
$100\theta_{MC}$	$1.04127^{+0.00097}_{-0.00099} \quad (-0.2\sigma)$	$\Omega_\Lambda$	$0.701^{+0.028}_{-0.030} \quad (-0.3\sigma)$	$z_{drag}$	$1060.1^{+1.0}_{-1.0} \quad (-0.3\sigma)$
$\tau$	$0.058^{+0.038}_{-0.043} \quad (-0.1\sigma)$	$\Omega_m$	$0.299^{+0.030}_{-0.028} \quad (+0.3\sigma)$	$r_{drag}$	$147.61^{+0.96}_{-0.98} \quad (-0.2\sigma)$
$A_L$	$1.17^{+0.19}_{-0.18} \quad (-0.5\sigma)$	$\Omega_m h^2$	$0.1406^{+0.0045}_{-0.0044} \quad (+0.3\sigma)$	$k_D$	$0.1405^{+0.0010}_{-0.00097} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.044^{+0.080}_{-0.079} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.09633^{+0.00093}_{-0.00096} \quad (-0.2\sigma)$	$100\theta_D$	$0.16066^{+0.00058}_{-0.00056} \quad (+0.2\sigma)$
$n_s$	$0.973^{+0.014}_{-0.014} \quad (-0.1\sigma)$	$\sigma_8$	$0.804^{+0.036}_{-0.034} \quad (+0.1\sigma)$	$z_{eq}$	$3343^{+110}_{-100} \quad (+0.3\sigma)$
$y_{cal}$	$1.0001^{+0.0050}_{-0.0050} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.440^{+0.035}_{-0.033} \quad (+0.2\sigma)$	$100\theta_{eq}$	$0.825^{+0.021}_{-0.021} \quad (-0.3\sigma)$
$A_{100}^{PS}$	$271^{+40}_{-50} \quad (+0.8\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.595^{+0.035}_{-0.033} \quad (+0.2\sigma)$	$r_{drag}/D_V(0.57)$	$0.0723^{+0.0017}_{-0.0017} \quad (-0.3\sigma)$
$A_{143}^{PS}$	$43^{+10}_{-10} \quad (+0.5\sigma)$	$\sigma_8/h^{0.5}$	$0.972^{+0.052}_{-0.049} \quad (+0.2\sigma)$	$H(0.57)$	$93.5^{+1.1}_{-0.99} \quad (-0.3\sigma)$
$A_{217}^{PS}$	$91^{+20}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.60^{+0.14}_{-0.14} \quad (-0.6\sigma)$	$D_A(0.57)$	$1375^{+30}_{-31} \quad (+0.3\sigma)$
$A_{217}^{CIB}$	$50^{+10}_{-10} \quad (-1.6\sigma)$	$z_{re}$	$7.9^{+3.7}_{-4.4} \quad (-0.0\sigma)$	$F_{AP}(0.57)$	$0.6729^{+0.0077}_{-0.0074} \quad (+0.3\sigma)$
$A_{143}^{tSZ}$	$< 6.84 \quad (-1.1\sigma)$	$10^9 A_s$	$2.10^{+0.17}_{-0.17} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.464^{+0.025}_{-0.024} \quad (+0.2\sigma)$
$r_{143 \times 217}^{PS}$	$0.57^{+0.22}_{-0.21}$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.028}_{-0.028} \quad (+0.1\sigma)$	$\sigma_8(0.57)$	$0.601^{+0.024}_{-0.025} \quad (+0.0\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{40}$	$1213^{+34}_{-33} \quad (+0.0\sigma)$	$Y_P^{BBN}$	$0.24637^{+0.00023}_{-0.00023} \quad (-3.6\sigma)$
$A^{kSZ}$	—	$D_{220}$	$5725^{+82}_{-81} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$30^{+6}_{-6} \quad (+1.0\sigma)$
$A_{100}^{dust}$	$0.97^{+0.37}_{-0.38}$	$D_{810}$	$2528^{+28}_{-28} \quad (+0.1\sigma)$	$f_{2000}^{217}$	$106.1^{+4.3}_{-4.2} \quad (+1.1\sigma)$
$A_{143}^{dust}$	$1.07^{+0.36}_{-0.36}$	$D_{1420}$	$815^{+10}_{-10} \quad (+0.1\sigma)$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4} \quad (+1.3\sigma)$
$A_{217}^{dust}$	$1.17^{+0.22}_{-0.23}$	$n_{s,0.002}$	$0.973^{+0.014}_{-0.014} \quad (-0.1\sigma)$	$\chi_{lowTEB}^2$	$10494.9 \quad (\nu: 1.4) \quad (+0.0\sigma)$
$A_{143 \times 217}^{dust}$	$0.95^{+0.35}_{-0.35}$	$Y_P$	$0.24505^{+0.00023}_{-0.00022} \quad (-3.6\sigma)$	$\chi_{CamSpec}^2$	$8154.2 \quad (\nu: 15.7)$
$c_{100}$	$0.9985^{+0.0019}_{-0.0019} \quad (+0.7\sigma)$	Age/Gyr	$13.759^{+0.090}_{-0.095} \quad (+0.3\sigma)$	$\chi_{prior}^2$	$7.3 \quad (\nu: 5.4) \quad (+0.0\sigma)$
$c_{217}$	$0.9988^{+0.0035}_{-0.0035} \quad (+2.2\sigma)$	$z_*$	$1089.5^{+1.0}_{-1.0} \quad (+0.3\sigma)$	$\chi_{CMB}^2$	$18649.1 \quad (\nu: 16.0) \quad (+1292.9\sigma)$

$$\bar{\chi}_{eff}^2 = 18656.35; \Delta\bar{\chi}_{eff}^2 = 7379.17; R - 1 = 0.00731$$



### 3.46 base\_Alens\_plikDS\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02269	$0.02258^{+0.00056}_{-0.00056}$ $(-0.2\sigma)$	$\Omega_m$	0.2948	$0.299^{+0.031}_{-0.028}$ $(+0.3\sigma)$	$D_A/\text{Gpc}$	13.925	$13.921^{+0.092}_{-0.093}$ $(-0.2\sigma)$
$\Omega_c h^2$	0.11673	$0.1173^{+0.0049}_{-0.0048}$ $(+0.3\sigma)$	$\Omega_m h^2$	0.14007	$0.1405^{+0.0046}_{-0.0044}$ $(+0.3\sigma)$	$z_{\text{drag}}$	1060.43	$1060.2^{+1.1}_{-1.0}$ $(-0.1\sigma)$
$100\theta_{\text{MC}}$	1.04134	$1.0412^{+0.0010}_{-0.0010}$ $(-0.2\sigma)$	$\Omega_m h^3$	0.09655	$0.09638^{+0.00098}_{-0.00094}$ $(-0.1\sigma)$	$r_{\text{drag}}$	147.60	$147.58^{+0.98}_{-0.98}$ $(-0.2\sigma)$
$\tau$	0.0606	$0.058^{+0.039}_{-0.044}$ $(-0.1\sigma)$	$\sigma_8$	0.8044	$0.804^{+0.036}_{-0.035}$ $(+0.1\sigma)$	$k_D$	0.14057	$0.1405^{+0.0010}_{-0.0010}$ $(+0.2\sigma)$
$A_L$	1.211	$1.18^{+0.20}_{-0.18}$ $(-0.4\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4368	$0.440^{+0.035}_{-0.033}$ $(+0.2\sigma)$	$100\theta_D$	0.16049	$0.16062^{+0.00059}_{-0.00058}$ $(+0.1\sigma)$
$\ln(10^{10} A_s)$	3.050	$3.045^{+0.081}_{-0.081}$ $(-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.5928	$0.594^{+0.035}_{-0.034}$ $(+0.2\sigma)$	$z_{\text{eq}}$	3332	$3343^{+110}_{-110}$ $(+0.3\sigma)$
$n_s$	0.9757	$0.972^{+0.014}_{-0.014}$ $(-0.3\sigma)$	$\sigma_8/h^{0.5}$	0.969	$0.971^{+0.052}_{-0.051}$ $(+0.2\sigma)$	$k_{\text{eq}}$	0.010169	$0.01020^{+0.00033}_{-0.00032}$ $(+0.3\sigma)$
$y_{\text{cal}}$	1.0002	$1.0001^{+0.0050}_{-0.0050}$ $(+0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	2.635	$2.61^{+0.15}_{-0.15}$ $(-0.5\sigma)$	$100\theta_{\text{eq}}$	0.8274	$0.825^{+0.021}_{-0.021}$ $(-0.3\sigma)$
$A_{217}^{\text{CIB}}$	61.5	$65^{+10}_{-10}$ $(+0.6\sigma)$	$z_{\text{re}}$	8.18	$7.9^{+3.8}_{-4.4}$ $(-0.0\sigma)$	$100\theta_{s,\text{eq}}$	0.4565	$0.455^{+0.011}_{-0.011}$ $(-0.3\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.90	—	$10^9 A_s$	2.111	$2.10^{+0.17}_{-0.18}$ $(-0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	0.07251	$0.0723^{+0.0017}_{-0.0017}$ $(-0.3\sigma)$
$A_{143}^{\text{tSZ}}$	6.36	$5.2^{+3.5}_{-3.7}$ $(-0.2\sigma)$	$10^9 A_s e^{-2\tau}$	1.8700	$1.870^{+0.029}_{-0.029}$ $(+0.2\sigma)$	$H(0.57)$	93.66	$93.5^{+1.1}_{-1.0}$ $(-0.3\sigma)$
$A_{100}^{\text{PS}}$	261	$274^{+50}_{-50}$ $(+0.9\sigma)$	$D_{40}$	1210.0	$1217^{+34}_{-34}$ $(+0.2\sigma)$	$D_A(0.57)$	1369.5	$1374^{+31}_{-31}$ $(+0.3\sigma)$
$A_{143}^{\text{PS}}$	51.6	$45^{+10}_{-20}$ $(+0.8\sigma)$	$D_{220}$	5742	$5739^{+84}_{-82}$ $(-0.0\sigma)$	$F_{\text{AP}}(0.57)$	0.6717	$0.6728^{+0.0079}_{-0.0074}$ $(+0.3\sigma)$
$A_{143 \times 217}^{\text{PS}}$	56.3	$41^{+20}_{-20}$ $(+0.3\sigma)$	$D_{810}$	2531.6	$2529^{+28}_{-28}$ $(+0.1\sigma)$	$f\sigma_8(0.57)$	0.4633	$0.464^{+0.025}_{-0.025}$ $(+0.2\sigma)$
$A_{217}^{\text{PS}}$	104.5	$95^{+20}_{-20}$ $(-0.3\sigma)$	$D_{1420}$	817.0	$815^{+10}_{-10}$ $(+0.1\sigma)$	$\sigma_8(0.57)$	0.6025	$0.601^{+0.025}_{-0.024}$ $(+0.0\sigma)$
$A^{\text{kSZ}}$	0.02	$< 7.44$ $(+0.1\sigma)$	$D_{2000}$	233.38	$232.0^{+3.9}_{-4.0}$ $(-0.2\sigma)$	$f_{2000}^{143}$	28.6	$31^{+6}_{-6}$ $(+1.2\sigma)$
$A_{100}^{\text{dustTT}}$	7.39	$7.4^{+3.7}_{-3.7}$ $(-0.0\sigma)$	$n_{s,0.002}$	0.9757	$0.972^{+0.014}_{-0.014}$ $(-0.3\sigma)$	$f_{2000}^{143 \times 217}$	29.75	$31^{+4}_{-4}$ $(+0.6\sigma)$
$A_{143}^{\text{dustTT}}$	9.11	$9.0^{+3.6}_{-3.6}$ $(+0.0\sigma)$	$Y_P$	0.245535	$0.24548^{+0.00024}_{-0.00025}$ $(-0.2\sigma)$	$f_{2000}^{217}$	110.45	$111.9^{+4.2}_{-4.0}$ $(+3.7\sigma)$
$A_{143 \times 217}^{\text{dustTT}}$	18.5	$16.9^{+8.0}_{-8.1}$ $(+0.1\sigma)$	$Y_P^{\text{BBN}}$	0.246862	$0.24681^{+0.00024}_{-0.00025}$ $(-0.2\sigma)$	$\chi_{\text{lowTEB}}^2$	10493.52	$10495.2 (\nu: 1.5)$ $(+0.2\sigma)$
$A_{217}^{\text{dustTT}}$	81.9	$80^{+10}_{-10}$ $(-0.2\sigma)$	$10^5 \text{D/H}$	2.531	$2.55^{+0.10}_{-0.10}$ $(+0.2\sigma)$	$\chi_{\text{plik}}^2$	746.6	$760.5 (\nu: 15.0)$ $(-2.6\sigma)$
$c_{100}$	0.99804	$0.9979^{+0.0015}_{-0.0015}$ $(+0.0\sigma)$	Age/Gyr	13.738	$13.755^{+0.094}_{-0.095}$ $(+0.2\sigma)$	$\chi_{\text{prior}}^2$	1.2	$7.0 (\nu: 6.0)$ $(-0.0\sigma)$
$c_{217}$	0.99573	$0.9960^{+0.0028}_{-0.0028}$ $(+0.3\sigma)$	$z_*$	1089.23	$1089.4^{+1.0}_{-1.0}$ $(+0.2\sigma)$	$\chi_{\text{CMB}}^2$	11240.1	$11255.7 (\nu: 15.5)$ $(-2.5\sigma)$
$H_0$	68.93	$68.6^{+2.3}_{-2.3}$ $(-0.3\sigma)$	$r_*$	145.03	$145.0^{+1.0}_{-1.0}$ $(-0.3\sigma)$			
$\Omega_\Lambda$	0.7052	$0.701^{+0.028}_{-0.031}$ $(-0.3\sigma)$	$100\theta_*$	1.04150	$1.04141^{+0.00097}_{-0.00097}$ $(-0.2\sigma)$			

Best-fit  $\chi_{\text{eff}}^2 = 11241.37$ ;  $\Delta\chi_{\text{eff}}^2 = -14.14$ ;  $\bar{\chi}_{\text{eff}}^2 = 11262.68$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = -14.51$ ;  $R - 1 = 0.00713$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.52 ( $\Delta$  0.11) plik\_dx11dr2\_DS\_v18\_TT: 746.61

### 3.47 base\_Alens\_plikHM\_TT\_WMAPTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02269	$0.02264^{+0.00059}_{-0.00058}$	$\Omega_m$	0.2928	$0.294^{+0.031}_{-0.028}$	$D_A/\text{Gpc}$	13.934	$13.935^{+0.096}_{-0.095}$
$\Omega_c h^2$	0.11636	$0.1165^{+0.0050}_{-0.0049}$	$\Omega_m h^2$	0.13970	$0.1398^{+0.0046}_{-0.0045}$	$z_{\text{drag}}$	1060.43	$1060.3^{+1.1}_{-1.1}$
$100\theta_{\text{MC}}$	1.04138	$1.0414^{+0.0010}_{-0.0010}$	$\Omega_m h^3$	0.09650	$0.09641^{+0.00099}_{-0.00099}$	$r_{\text{drag}}$	147.70	$147.7^{+1.0}_{-1.0}$
$\tau$	0.0686	$0.069^{+0.023}_{-0.022}$	$\sigma_8$	0.8089	$0.810^{+0.025}_{-0.025}$	$k_D$	0.14047	$0.1404^{+0.0010}_{-0.0010}$
$A_L$	1.224	$1.20^{+0.19}_{-0.18}$	$\sigma_8 \Omega_m^{0.5}$	0.4377	$0.439^{+0.033}_{-0.032}$	$100\theta_D$	0.16051	$0.16059^{+0.00062}_{-0.00059}$
$\ln(10^{10} A_s)$	3.0638	$3.065^{+0.047}_{-0.045}$	$\sigma_8 \Omega_m^{0.25}$	0.5950	$0.596^{+0.031}_{-0.030}$	$z_{\text{eq}}$	3323	$3325^{+110}_{-110}$
$n_s$	0.9761	$0.975^{+0.014}_{-0.014}$	$\sigma_8/h^{0.5}$	0.9733	$0.975^{+0.044}_{-0.043}$	$k_{\text{eq}}$	0.010142	$0.01015^{+0.00033}_{-0.00033}$
$y_{\text{cal}}$	0.99993	$1.0000^{+0.0050}_{-0.0050}$	$\langle d^2 \rangle^{1/2}$	2.663	$2.65^{+0.15}_{-0.15}$	$100\theta_{\text{eq}}$	0.8290	$0.829^{+0.022}_{-0.022}$
$A_{217}^{\text{CIB}}$	59.7	$61^{+10}_{-10}$	$z_{\text{re}}$	8.92	$9.0^{+2.1}_{-2.1}$	$100\theta_{s,\text{eq}}$	0.4573	$0.457^{+0.011}_{-0.011}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.64	—	$10^9 A_s$	2.141	$2.14^{+0.10}_{-0.096}$	$r_{\text{drag}}/D_V(0.57)$	0.07264	$0.0726^{+0.0018}_{-0.0018}$
$A_{143}^{\text{tSZ}}$	6.87	$5.7^{+3.7}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8665	$1.867^{+0.029}_{-0.029}$	$H(0.57)$	93.72	$93.7^{+1.1}_{-1.0}$
$A_{100}^{\text{PS}}$	238	$247^{+50}_{-50}$	$D_{40}$	1210.6	$1215^{+35}_{-34}$	$D_A(0.57)$	1367.6	$1369^{+31}_{-31}$
$A_{143}^{\text{PS}}$	41.4	$38^{+20}_{-20}$	$D_{220}$	5738	$5739^{+83}_{-84}$	$F_{\text{AP}}(0.57)$	0.6712	$0.6716^{+0.0078}_{-0.0075}$
$A_{143 \times 217}^{\text{PS}}$	46.4	$38^{+20}_{-20}$	$D_{810}$	2527.2	$2526^{+28}_{-28}$	$f\sigma_8(0.57)$	0.4653	$0.466^{+0.021}_{-0.021}$
$A_{217}^{\text{PS}}$	104.3	$98^{+20}_{-20}$	$D_{1420}$	815.3	$814.3^{+9.9}_{-9.8}$	$\sigma_8(0.57)$	0.6064	$0.607^{+0.015}_{-0.015}$
$A^{\text{kSZ}}$	0.00	$< 6.97$	$D_{2000}$	233.12	$232.4^{+4.0}_{-4.0}$	$f_{2000}^{143}$	25.2	$26^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.33	$7.4^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9761	$0.975^{+0.014}_{-0.014}$	$f_{2000}^{143 \times 217}$	28.88	$29^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	8.91	$8.9^{+3.6}_{-3.6}$	$Y_P$	0.245535	$0.24551^{+0.00025}_{-0.00026}$	$f_{2000}^{217}$	102.60	$103.4^{+4.5}_{-4.5}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$16.6^{+8.2}_{-8.1}$	$Y_P^{\text{BBN}}$	0.246863	$0.24684^{+0.00025}_{-0.00026}$	$\chi_{\text{WMAPTEB}}^2$	19731.87	19733.3 ( $\nu$ : 1.8)
$A_{217}^{\text{dustTT}}$	82.6	$82^{+10}_{-10}$	$10^5 D/H$	2.531	$2.54^{+0.11}_{-0.10}$	$\chi_{\text{plik}}^2$	760.5	775.1 ( $\nu$ : 15.4)
$c_{100}$	0.99797	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.735	$13.741^{+0.095}_{-0.099}$	$\chi_{\text{prior}}^2$	1.6	7.2 ( $\nu$ : 6.2)
$c_{217}$	0.99541	$0.9955^{+0.0029}_{-0.0028}$	$z_*$	1089.20	$1089.3^{+1.1}_{-1.0}$	$\chi_{\text{CMB}}^2$	20492.4	20508.3 ( $\nu$ : 16.4)
$H_0$	69.07	$69.0^{+2.4}_{-2.3}$	$r_*$	145.13	$145.1^{+1.0}_{-1.0}$			
$\Omega_\Lambda$	0.7072	$0.706^{+0.028}_{-0.031}$	$100\theta_*$	1.04154	$1.04153^{+0.00099}_{-0.00099}$			

Best-fit  $\chi_{\text{eff}}^2 = 20493.97$ ;  $\bar{\chi}_{\text{eff}}^2 = 20515.50$ ;  $R - 1 = 0.01119$

$\chi_{\text{eff}}^2$ : CMB - bflike\_WMAP353ggf\_LFI312\_nw8: 19731.87 plik\_dx11dr2\_HM\_v18\_TT: 760.54

### 3.48 base\_Alens\_plikHM\_TT\_WMAPTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02249^{+0.00045}_{-0.00045}$	$\Omega_m h^2$	$0.1413^{+0.0025}_{-0.0025}$	$r_{\text{drag}}$	$147.43^{+0.69}_{-0.67}$
$\Omega_c h^2$	$0.1182^{+0.0026}_{-0.0026}$	$\Omega_m h^3$	$0.09635^{+0.00096}_{-0.00095}$	$k_D$	$0.14060^{+0.00089}_{-0.00091}$
$100\theta_{\text{MC}}$	$1.04116^{+0.00084}_{-0.00087}$	$\sigma_8$	$0.815^{+0.022}_{-0.020}$	$100\theta_D$	$0.16069^{+0.00057}_{-0.00055}$
$\tau$	$0.068^{+0.023}_{-0.023}$	$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.020}_{-0.019}$	$z_{\text{eq}}$	$3362^{+59}_{-59}$
$A_L$	$1.16^{+0.15}_{-0.15}$	$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.020}_{-0.019}$	$k_{\text{eq}}$	$0.01026^{+0.00018}_{-0.00018}$
$\ln(10^{10} A_s)$	$3.066^{+0.048}_{-0.045}$	$\sigma_8/h^{0.5}$	$0.987^{+0.031}_{-0.028}$	$100\theta_{\text{eq}}$	$0.821^{+0.011}_{-0.011}$
$n_s$	$0.9702^{+0.0089}_{-0.0089}$	$\langle d^2 \rangle^{1/2}$	$2.63^{+0.14}_{-0.15}$	$100\theta_{s,\text{eq}}$	$0.4533^{+0.0058}_{-0.0057}$
$y_{\text{cal}}$	$1.0001^{+0.0050}_{-0.0050}$	$z_{\text{re}}$	$8.9^{+2.1}_{-2.0}$	$r_{\text{drag}}/D_V(0.57)$	$0.07198^{+0.00090}_{-0.00087}$
$A_{217}^{\text{CIB}}$	$62^{+10}_{-10}$	$10^9 A_s$	$2.15^{+0.10}_{-0.097}$	$H(0.57)$	$93.31^{+0.61}_{-0.60}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.874^{+0.023}_{-0.023}$	$D_A(0.57)$	$1380^{+16}_{-16}$
$A_{143}^{\text{tSZ}}$	$5.6^{+3.5}_{-3.7}$	$D_{40}$	$1223^{+27}_{-26}$	$F_{\text{AP}}(0.57)$	$0.6742^{+0.0040}_{-0.0040}$
$A_{100}^{\text{PS}}$	$249^{+50}_{-50}$	$D_{220}$	$5730^{+77}_{-81}$	$f\sigma_8(0.57)$	$0.472^{+0.015}_{-0.014}$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20}$	$D_{810}$	$2529^{+27}_{-27}$	$\sigma_8(0.57)$	$0.608^{+0.015}_{-0.014}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$D_{1420}$	$813.8^{+9.9}_{-10}$	$f_{2000}^{143}$	$27^{+6}_{-6}$
$A_{217}^{\text{PS}}$	$98^{+20}_{-20}$	$D_{2000}$	$231.8^{+3.7}_{-3.7}$	$f_{2000}^{143 \times 217}$	$30^{+4}_{-4}$
$A^{\text{kSZ}}$	$< 7.19$	$n_{s,0.002}$	$0.9702^{+0.0089}_{-0.0089}$	$f_{2000}^{217}$	$104.1^{+4.2}_{-4.1}$
$A_{100}^{\text{dustTT}}$	$7.4^{+3.6}_{-3.6}$	$Y_{\text{P}}$	$0.24545^{+0.00020}_{-0.00021}$	$\chi_{\text{WMAPTEB}}^2$	$19733.9 (\nu: 1.6)$
$A_{143}^{\text{dustTT}}$	$8.9^{+3.6}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24677^{+0.00020}_{-0.00021}$	$\chi_{\text{plik}}^2$	$774.2 (\nu: 17.0)$
$A_{143 \times 217}^{\text{dustTT}}$	$16.8^{+8.3}_{-8.0}$	$10^5 \text{D}/\text{H}$	$2.569^{+0.085}_{-0.082}$	$\chi_{6\text{DF}}^2$	$0.045 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$\text{Age}/\text{Gyr}$	$13.770^{+0.063}_{-0.063}$	$\chi_{\text{MGS}}^2$	$1.79 (\nu: 0.2)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	$1089.61^{+0.67}_{-0.67}$	$\chi_{\text{DR11CMass}}^2$	$2.99 (\nu: 0.3)$
$c_{217}$	$0.9956^{+0.0030}_{-0.0028}$	$r_*$	$144.80^{+0.63}_{-0.62}$	$\chi_{\text{DR11LOWZ}}^2$	$0.40 (\nu: 0.1)$
$H_0$	$68.2^{+1.2}_{-1.2}$	$100\theta_*$	$1.04133^{+0.00083}_{-0.00085}$	$\chi_{\text{prior}}^2$	$7.1 (\nu: 6.3)$
$\Omega_\Lambda$	$0.696^{+0.015}_{-0.016}$	$D_A/\text{Gpc}$	$13.906^{+0.063}_{-0.060}$	$\chi_{\text{CMB}}^2$	$20508.1 (\nu: 18.7)$
$\Omega_m$	$0.304^{+0.016}_{-0.015}$	$z_{\text{drag}}$	$1060.09^{+0.99}_{-0.98}$	$\chi_{\text{BAO}}^2$	$5.2 (\nu: 0.8)$

$$\bar{\chi}_{\text{eff}}^2 = 20520.50; R - 1 = 0.02623$$

## 4 Alensf

### 4.1 base\_Alensf\_plikHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02270	$0.02262^{+0.00058}_{-0.00055}$	$\Omega_m$	0.2925	$0.296^{+0.031}_{-0.029}$	$D_A/\text{Gpc}$	13.934	$13.929^{+0.093}_{-0.096}$
$\Omega_c h^2$	0.11633	$0.1168^{+0.0050}_{-0.0049}$	$\Omega_m h^2$	0.13967	$0.1401^{+0.0046}_{-0.0045}$	$z_{\text{drag}}$	1060.43	$1060.3^{+1.1}_{-1.1}$
$100\theta_{\text{MC}}$	1.04141	$1.0413^{+0.0010}_{-0.0010}$	$\Omega_m h^3$	0.09651	$0.09641^{+0.00098}_{-0.00095}$	$r_{\text{drag}}$	147.70	$147.66^{+0.98}_{-1.0}$
$\tau$	0.0617	$0.060^{+0.041}_{-0.041}$	$\sigma_8$	0.8035	$0.804^{+0.035}_{-0.036}$	$k_D$	0.14047	$0.1404^{+0.0010}_{-0.0010}$
$A_L^{\text{fid}}$	1.182	$1.17^{+0.13}_{-0.13}$	$\sigma_8 \Omega_m^{0.5}$	0.4346	$0.437^{+0.035}_{-0.034}$	$100\theta_D$	0.16050	$0.16059^{+0.00059}_{-0.00059}$
$\ln(10^{10} A_s)$	3.051	$3.048^{+0.080}_{-0.081}$	$\sigma_8 \Omega_m^{0.25}$	0.5909	$0.593^{+0.035}_{-0.035}$	$z_{\text{eq}}$	3322	$3332^{+110}_{-110}$
$n_s$	0.9763	$0.974^{+0.014}_{-0.014}$	$\sigma_8/h^{0.5}$	0.967	$0.969^{+0.052}_{-0.052}$	$k_{\text{eq}}$	0.010140	$0.01017^{+0.00034}_{-0.00033}$
$y_{\text{cal}}$	1.00006	$1.0000^{+0.0048}_{-0.0047}$	$\langle d^2 \rangle^{1/2}$	2.390	$2.40^{+0.12}_{-0.12}$	$100\theta_{\text{eq}}$	0.8292	$0.827^{+0.022}_{-0.022}$
$A_{217}^{\text{CIB}}$	59.2	$61^{+10}_{-10}$	$z_{\text{re}}$	8.27	$8.1^{+4.0}_{-4.4}$	$100\theta_{s,\text{eq}}$	0.4574	$0.456^{+0.011}_{-0.011}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.73	—	$10^9 A_s$	2.113	$2.11^{+0.17}_{-0.18}$	$r_{\text{drag}}/D_V(0.57)$	0.07266	$0.0725^{+0.0018}_{-0.0018}$
$A_{143}^{\text{tSZ}}$	6.81	$5.7^{+3.7}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8675	$1.868^{+0.029}_{-0.029}$	$H(0.57)$	93.73	$93.6^{+1.2}_{-1.1}$
$A_{100}^{\text{PS}}$	237	$246^{+50}_{-50}$	$D_{40}$	1208.3	$1214^{+35}_{-35}$	$D_A(0.57)$	1367.3	$1371^{+31}_{-32}$
$A_{143}^{\text{PS}}$	42.4	$38^{+20}_{-20}$	$D_{220}$	5741	$5739^{+83}_{-81}$	$F_{\text{AP}}(0.57)$	0.6711	$0.6720^{+0.0079}_{-0.0076}$
$A_{143 \times 217}^{\text{PS}}$	48.5	$38^{+20}_{-20}$	$D_{810}$	2528.7	$2527^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4622	$0.463^{+0.025}_{-0.025}$
$A_{217}^{\text{PS}}$	105.0	$98^{+20}_{-20}$	$D_{1420}$	815.9	$814.4^{+9.9}_{-9.8}$	$\sigma_8(0.57)$	0.6024	$0.602^{+0.025}_{-0.025}$
$A^{\text{kSZ}}$	0.00	$< 7.02$	$D_{2000}$	233.43	$232.6^{+4.1}_{-4.1}$	$f_{2000}^{143}$	25.0	$26^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.35	$7.5^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9763	$0.974^{+0.014}_{-0.014}$	$f_{2000}^{143 \times 217}$	28.70	$29^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	9.01	$8.9^{+3.6}_{-3.6}$	$Y_P$	0.245538	$0.24550^{+0.00025}_{-0.00025}$	$f_{2000}^{217}$	102.40	$103.3^{+4.4}_{-4.4}$
$A_{143 \times 217}^{\text{dustTT}}$	17.9	$16.6^{+8.1}_{-8.2}$	$Y_P^{\text{BBN}}$	0.246865	$0.24683^{+0.00025}_{-0.00025}$	$\chi_{\text{lowTEB}}^2$	10493.41	$10494.9 (\nu: 1.5)$
$A_{217}^{\text{dustTT}}$	82.7	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	2.530	$2.55^{+0.10}_{-0.10}$	$\chi_{\text{plik}}^2$	760.7	$775.0 (\nu: 15.4)$
$c_{100}$	0.99798	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.734	$13.746^{+0.095}_{-0.10}$	$\chi_{\text{prior}}^2$	1.5	$7.1 (\nu: 5.9)$
$c_{217}$	0.99538	$0.9956^{+0.0028}_{-0.0028}$	$z_*$	1089.19	$1089.3^{+1.0}_{-1.0}$	$\chi_{\text{CMB}}^2$	11254.1	$11269.9 (\nu: 16.2)$
$H_0$	69.10	$68.8^{+2.4}_{-2.4}$	$r_*$	145.13	$145.1^{+1.0}_{-1.1}$			
$\Omega_\Lambda$	0.7075	$0.704^{+0.029}_{-0.031}$	$100\theta_*$	1.04156	$1.0415^{+0.0010}_{-0.00099}$			

Best-fit  $\chi_{\text{eff}}^2 = 11255.58$ ;  $\bar{\chi}_{\text{eff}}^2 = 11277.01$ ;  $R - 1 = 0.00509$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10493.41 plik\_dx11dr2\_HM\_v18\_TT: 760.69

## 4.2 base\_Alensf\_plikHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022450	$0.02240^{+0.00035}_{-0.00034}$	$A_{100 \times 217}^{\text{dustTE}}$	0.301	$0.30^{+0.16}_{-0.16}$	Age/Gyr	13.781	$13.788^{+0.057}_{-0.057}$
$\Omega_c h^2$	0.11824	$0.1185^{+0.0031}_{-0.0030}$	$A_{143}^{\text{dustTE}}$	0.152	$0.15^{+0.11}_{-0.10}$	$z_*$	1089.67	$1089.75^{+0.65}_{-0.64}$
$100\theta_{\text{MC}}$	1.04094	$1.04092^{+0.00065}_{-0.00065}$	$A_{143 \times 217}^{\text{dustTE}}$	0.335	$0.33^{+0.16}_{-0.16}$	$r_*$	144.83	$144.79^{+0.66}_{-0.65}$
$\tau$	0.0582	$0.057^{+0.038}_{-0.042}$	$A_{217}^{\text{dustTE}}$	1.649	$1.65^{+0.49}_{-0.50}$	$100\theta_*$	1.04112	$1.04110^{+0.00064}_{-0.00063}$
$A_L^{\text{fid}}$	1.145	$1.13^{+0.10}_{-0.098}$	$c_{100}$	0.99832	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.911	$13.908^{+0.060}_{-0.060}$
$\ln(10^{10} A_s)$	3.048	$3.047^{+0.077}_{-0.078}$	$c_{217}$	0.99554	$0.9958^{+0.0029}_{-0.0029}$	$z_{\text{drag}}$	1060.01	$1059.91^{+0.68}_{-0.65}$
$n_s$	0.9704	$0.9680^{+0.0097}_{-0.010}$	$H_0$	68.05	$67.9^{+1.4}_{-1.4}$	$r_{\text{drag}}$	147.47	$147.45^{+0.64}_{-0.62}$
$y_{\text{cal}}$	0.99994	$1.0001^{+0.0049}_{-0.0050}$	$\Omega_\Lambda$	0.6948	$0.693^{+0.018}_{-0.019}$	$k_D$	0.14053	$0.14051^{+0.00064}_{-0.00065}$
$A_{217}^{\text{CIB}}$	59.0	$62^{+10}_{-10}$	$\Omega_m$	0.3052	$0.307^{+0.019}_{-0.018}$	$100\theta_D$	0.160707	$0.16076^{+0.00037}_{-0.00038}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.90	—	$\Omega_m h^2$	0.14133	$0.1416^{+0.0029}_{-0.0028}$	$z_{\text{eq}}$	3362	$3367^{+69}_{-68}$
$A_{143}^{\text{tSZ}}$	6.66	$5.6^{+3.7}_{-3.7}$	$\Omega_m h^3$	0.09618	$0.09613^{+0.00061}_{-0.00059}$	$k_{\text{eq}}$	0.010261	$0.01028^{+0.00021}_{-0.00021}$
$A_{100}^{\text{PS}}$	243	$254^{+60}_{-50}$	$\sigma_8$	0.8082	$0.808^{+0.034}_{-0.033}$	$100\theta_{\text{eq}}$	0.8208	$0.820^{+0.013}_{-0.013}$
$A_{143}^{\text{PS}}$	48.3	$41^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4465	$0.448^{+0.027}_{-0.026}$	$100\theta_{s,\text{eq}}$	0.4532	$0.4527^{+0.0068}_{-0.0067}$
$A_{143 \times 217}^{\text{PS}}$	56.1	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6007	$0.601^{+0.030}_{-0.028}$	$r_{\text{drag}}/D_V(0.57)$	0.07191	$0.0718^{+0.0011}_{-0.0011}$
$A_{217}^{\text{PS}}$	108.5	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9797	$0.981^{+0.046}_{-0.044}$	$H(0.57)$	93.21	$93.15^{+0.64}_{-0.62}$
$A^{\text{kSZ}}$	0.00	$< 6.97$	$\langle d^2 \rangle^{1/2}$	2.421	$2.43^{+0.11}_{-0.11}$	$D_A(0.57)$	1381.6	$1383^{+19}_{-19}$
$A_{100}^{\text{dustTT}}$	7.30	$7.4^{+3.6}_{-3.7}$	$z_{\text{re}}$	8.02	$7.8^{+3.7}_{-4.4}$	$F_{\text{AP}}(0.57)$	0.67443	$0.6749^{+0.0049}_{-0.0047}$
$A_{143}^{\text{dustTT}}$	8.78	$8.8^{+3.6}_{-3.5}$	$10^9 A_s$	2.108	$2.11^{+0.16}_{-0.17}$	$f\sigma_8(0.57)$	0.4683	$0.469^{+0.022}_{-0.021}$
$A_{143 \times 217}^{\text{dustTT}}$	18.1	$16.6^{+8.1}_{-8.0}$	$10^9 A_s e^{-2\tau}$	1.8764	$1.877^{+0.024}_{-0.024}$	$\sigma_8(0.57)$	0.6027	$0.602^{+0.024}_{-0.025}$
$A_{217}^{\text{dustTT}}$	82.8	$81^{+10}_{-10}$	$D_{40}$	1220.1	$1226^{+30}_{-29}$	$f_{2000}^{143}$	26.2	$28^{+6}_{-6}$
$A_{100}^{\text{dustEE}}$	0.0819	$0.082^{+0.011}_{-0.011}$	$D_{220}$	5732	$5736^{+78}_{-78}$	$f_{2000}^{143 \times 217}$	30.07	$31^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0495	$0.0492^{+0.0098}_{-0.0097}$	$D_{810}$	2532.4	$2531^{+27}_{-27}$	$f_{2000}^{217}$	103.49	$104.5^{+3.8}_{-3.8}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.099^{+0.064}_{-0.063}$	$D_{1420}$	815.1	$813.6^{+9.4}_{-9.5}$	$\chi_{\text{lowTEB}}^2$	10494.37	$10495.8 (\nu: 1.3)$
$A_{143}^{\text{dustEE}}$	0.1009	$0.101^{+0.014}_{-0.013}$	$D_{2000}$	232.11	$231.3^{+3.3}_{-3.3}$	$\chi_{\text{plik}}^2$	2429.6	$2448.8 (\nu: 22.2)$
$A_{143 \times 217}^{\text{dustEE}}$	0.222	$0.223^{+0.091}_{-0.091}$	$n_{s,0.002}$	0.9704	$0.9680^{+0.0097}_{-0.010}$	$\chi_{\text{prior}}^2$	6.5	$19.1 (\nu: 14.4)$
$A_{217}^{\text{dustEE}}$	0.651	$0.65^{+0.25}_{-0.25}$	$Y_P$	0.245428	$0.24541^{+0.00015}_{-0.00015}$	$\chi_{\text{CMB}}^2$	12924.0	$12944.6 (\nu: 23.2)$
$A_{100}^{\text{dustTE}}$	0.142	$0.140^{+0.075}_{-0.073}$	$Y_P^{\text{BBN}}$	0.246755	$0.24673^{+0.00016}_{-0.00016}$			
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.057}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.576	$2.585^{+0.063}_{-0.065}$			

Best-fit  $\chi_{\text{eff}}^2 = 12930.49$ ;  $\bar{\chi}_{\text{eff}}^2 = 12963.78$ ;  $R - 1 = 0.01020$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10494.37 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2429.63

### 4.3 base\_Alensf\_CamSpecHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02267	$0.02265^{+0.00059}_{-0.00056}$ (+0.1 $\sigma$ )	$\beta_1^1$	-0.08	$-0.1^{+1.9}_{-2.0}$	$r_*$	145.15	$145.2^{+1.0}_{-1.0}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	0.11634	$0.1164^{+0.0049}_{-0.0047}$ (-0.2 $\sigma$ )	$H_0$	69.07	$69.0^{+2.4}_{-2.3}$ (+0.2 $\sigma$ )	$100\theta_*$	1.04158	$1.0416^{+0.0010}_{-0.00098}$ (+0.2 $\sigma$ )
$100\theta_{MC}$	1.04142	$1.0414^{+0.0010}_{-0.0010}$ (+0.2 $\sigma$ )	$\Omega_\Lambda$	0.7073	$0.707^{+0.028}_{-0.030}$ (+0.2 $\sigma$ )	$z_{drag}$	1060.35	$1060.3^{+1.1}_{-1.1}$ (+0.1 $\sigma$ )
$\tau$	0.0616	$0.062^{+0.042}_{-0.042}$ (+0.1 $\sigma$ )	$\Omega_m$	0.2927	$0.293^{+0.030}_{-0.028}$ (-0.2 $\sigma$ )	$r_{drag}$	147.73	$147.74^{+0.96}_{-1.0}$ (+0.1 $\sigma$ )
$A_L^{fid}$	1.168	$1.16^{+0.13}_{-0.13}$ (-0.1 $\sigma$ )	$\Omega_m h^2$	0.13966	$0.1397^{+0.0046}_{-0.0044}$ (-0.2 $\sigma$ )	$k_D$	0.14043	$0.1404^{+0.0010}_{-0.0010}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.048	$3.048^{+0.084}_{-0.085}$ (-0.0 $\sigma$ )	$\Omega_m h^3$	0.09647	$0.0964^{+0.0010}_{-0.00096}$ (+0.1 $\sigma$ )	$100\theta_D$	0.16053	$0.16056^{+0.00061}_{-0.00060}$ (-0.1 $\sigma$ )
$n_s$	0.9773	$0.977^{+0.014}_{-0.014}$ (+0.4 $\sigma$ )	$\sigma_8$	0.8030	$0.803^{+0.037}_{-0.036}$ (-0.0 $\sigma$ )	$z_{eq}$	3322	$3323^{+110}_{-100}$ (-0.2 $\sigma$ )
$y_{cal}$	0.99989	$0.9999^{+0.0048}_{-0.0049}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4344	$0.435^{+0.035}_{-0.033}$ (-0.1 $\sigma$ )	$100\theta_{eq}$	0.8292	$0.829^{+0.021}_{-0.021}$ (+0.2 $\sigma$ )
$A_{100}^{PS}$	229.8	$234^{+40}_{-50}$ (-0.5 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.5906	$0.591^{+0.035}_{-0.034}$ (-0.1 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07265	$0.0726^{+0.0018}_{-0.0017}$ (+0.2 $\sigma$ )
$A_{143}^{PS}$	30.4	$33^{+20}_{-20}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	0.966	$0.967^{+0.052}_{-0.051}$ (-0.1 $\sigma$ )	$H(0.57)$	93.71	$93.7^{+1.1}_{-1.0}$ (+0.2 $\sigma$ )
$A_{217}^{PS}$	103.1	$100^{+30}_{-30}$ (+0.3 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.385	$2.39^{+0.12}_{-0.12}$ (-0.2 $\sigma$ )	$D_A(0.57)$	1367.7	$1368^{+31}_{-31}$ (-0.2 $\sigma$ )
$A_{217}^{CIB}$	45.3	$43^{+10}_{-10}$ (-2.8 $\sigma$ )	$z_{re}$	8.27	$8.2^{+4.1}_{-4.5}$ (+0.1 $\sigma$ )	$F_{AP}(0.57)$	0.6712	$0.6714^{+0.0078}_{-0.0073}$ (-0.2 $\sigma$ )
$A_{143}^{tSZ}$	5.97	$< 7.17$ (-1.0 $\sigma$ )	$10^9 A_s$	2.107	$2.11^{+0.18}_{-0.18}$ (-0.0 $\sigma$ )	$f\sigma_8(0.57)$	0.4619	$0.462^{+0.025}_{-0.025}$ (-0.1 $\sigma$ )
$r_{143 \times 217}^{PS}$	0.496	$0.53^{+0.25}_{-0.24}$	$10^9 A_s e^{-2\tau}$	1.8628	$1.863^{+0.028}_{-0.027}$ (-0.4 $\sigma$ )	$\sigma_8(0.57)$	0.6020	$0.602^{+0.026}_{-0.025}$ (+0.0 $\sigma$ )
$\xi^{tSZ \times CIB}$	0.00	—	$D_{40}$	1202.5	$1205^{+35}_{-34}$ (-0.5 $\sigma$ )	$Y_P^{BBN}$	0.246429	$0.24642^{+0.00025}_{-0.00024}$ (-3.2 $\sigma$ )
$A^{kSZ}$	0.0	—	$D_{220}$	5719	$5718^{+84}_{-81}$ (-0.5 $\sigma$ )	$f_{2000}^{143}$	24.5	$25^{+7}_{-7}$ (-0.4 $\sigma$ )
$A_{100}^{dust}$	0.987	$0.99^{+0.38}_{-0.38}$	$D_{810}$	2523.8	$2523^{+27}_{-27}$ (-0.3 $\sigma$ )	$f_{2000}^{217}$	103.14	$103.5^{+4.5}_{-4.6}$ (+0.1 $\sigma$ )
$A_{143}^{dust}$	1.013	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	814.9	$814.4^{+9.9}_{-9.9}$ (+0.0 $\sigma$ )	$f_{2000}^{143 \times 217}$	28.15	$28^{+5}_{-5}$ (-0.4 $\sigma$ )
$A_{217}^{dust}$	1.213	$1.23^{+0.23}_{-0.23}$	$n_{s,0.002}$	0.9773	$0.977^{+0.014}_{-0.014}$ (+0.4 $\sigma$ )	$\chi_{lowTEB}^2$	10493.13	$10494.4 (\nu: 1.5)$ (-0.3 $\sigma$ )
$A_{143 \times 217}^{dust}$	0.982	$0.96^{+0.35}_{-0.35}$	$Y_P$	0.245107	$0.24510^{+0.00024}_{-0.00024}$ (-3.2 $\sigma$ )	$\chi_{CamSpec}^2$	8043.1	$8057.8 (\nu: 16.3)$
$c_{100}$	0.99696	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	Age/Gyr	13.736	$13.738^{+0.094}_{-0.10}$ (-0.2 $\sigma$ )	$\chi_{prior}^2$	2.8	$8.4 (\nu: 6.2)$ (+0.4 $\sigma$ )
$c_{217}$	0.99648	$0.9967^{+0.0035}_{-0.0035}$ (+0.8 $\sigma$ )	$z_*$	1089.21	$1089.2^{+1.0}_{-1.0}$ (-0.2 $\sigma$ )	$\chi_{CMB}^2$	18536.2	$18552.2 (\nu: 16.9)$ (+1281.2 $\sigma$ )

Best-fit  $\chi_{eff}^2 = 18538.96$ ;  $\Delta\chi_{eff}^2 = 7283.38$ ;  $\bar{\chi}_{eff}^2 = 18560.58$ ;  $\Delta\bar{\chi}_{eff}^2 = 7283.57$ ;  $R - 1 = 0.00542$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.13 ( $\Delta$  -0.29) CamSpec like\_v9.10CMH\_unified: 8043.05

#### 4.4 base\_Alensf\_CamSpecHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022528	$0.02251^{+0.00035}_{-0.00036}$ (+0.6 $\sigma$ )	$\mathcal{C}_{EE}$	1.0002	$1.0002^{+0.0085}_{-0.0083}$	$r_*$	144.87	$144.87^{+0.63}_{-0.63}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	0.11784	$0.1179^{+0.0030}_{-0.0029}$ (-0.4 $\sigma$ )	$\beta_1^1$	-0.07	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	1.04116	$1.04116^{+0.00059}_{-0.00061}$ (+0.2 $\sigma$ )
$100\theta_{MC}$	1.04099	$1.04098^{+0.00061}_{-0.00062}$ (+0.2 $\sigma$ )	$H_0$	68.27	$68.2^{+1.4}_{-1.4}$ (+0.5 $\sigma$ )	$z_{drag}$	1060.12	$1060.10^{+0.71}_{-0.69}$ (+0.6 $\sigma$ )
$\tau$	0.0593	$0.059^{+0.041}_{-0.041}$ (+0.1 $\sigma$ )	$\Omega_\Lambda$	0.6974	$0.697^{+0.017}_{-0.018}$ (+0.4 $\sigma$ )	$r_{drag}$	147.49	$147.49^{+0.62}_{-0.61}$ (+0.1 $\sigma$ )
$A_L^{fid}$	1.109	$1.11^{+0.10}_{-0.10}$ (-0.5 $\sigma$ )	$\Omega_m$	0.3026	$0.303^{+0.018}_{-0.017}$ (-0.4 $\sigma$ )	$k_D$	0.14058	$0.14057^{+0.00066}_{-0.00066}$ (+0.2 $\sigma$ )
$\ln(10^{10} A_s)$	3.047	$3.046^{+0.080}_{-0.081}$ (-0.0 $\sigma$ )	$\Omega_m h^2$	0.14102	$0.1410^{+0.0027}_{-0.0027}$ (-0.3 $\sigma$ )	$100\theta_D$	0.160604	$0.16062^{+0.00040}_{-0.00039}$ (-0.7 $\sigma$ )
$n_s$	0.9719	$0.9715^{+0.0096}_{-0.0094}$ (+0.7 $\sigma$ )	$\Omega_m h^3$	0.09627	$0.09625^{+0.00061}_{-0.00062}$ (+0.4 $\sigma$ )	$z_{eq}$	3354	$3355^{+65}_{-65}$ (-0.3 $\sigma$ )
$y_{cal}$	0.99999	$0.9998^{+0.0048}_{-0.0049}$ (-0.1 $\sigma$ )	$\sigma_8$	0.8065	$0.806^{+0.035}_{-0.033}$ (-0.1 $\sigma$ )	$100\theta_{eq}$	0.8224	$0.822^{+0.013}_{-0.013}$ (+0.4 $\sigma$ )
$A_{100}^{PS}$	234.8	$238^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4436	$0.444^{+0.026}_{-0.025}$ (-0.3 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07205	$0.0720^{+0.0010}_{-0.0010}$ (+0.4 $\sigma$ )
$A_{143}^{PS}$	33.2	$35^{+10}_{-10}$ (-0.7 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.5981	$0.598^{+0.029}_{-0.028}$ (-0.2 $\sigma$ )	$H(0.57)$	93.33	$93.31^{+0.62}_{-0.62}$ (+0.5 $\sigma$ )
$A_{217}^{PS}$	102.4	$100^{+30}_{-30}$ (+0.2 $\sigma$ )	$\sigma_8/h^{0.5}$	0.9761	$0.976^{+0.046}_{-0.044}$ (-0.2 $\sigma$ )	$D_A(0.57)$	1378.5	$1379^{+18}_{-18}$ (-0.5 $\sigma$ )
$A_{217}^{CIB}$	46.3	$44^{+10}_{-10}$ (-2.8 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.411	$2.41^{+0.11}_{-0.11}$ (-0.3 $\sigma$ )	$F_{AP}(0.57)$	0.67375	$0.6739^{+0.0046}_{-0.0045}$ (-0.4 $\sigma$ )
$A_{143}^{tSZ}$	5.66	< 7.06 (-1.0 $\sigma$ )	$z_{re}$	8.11	$8.0^{+4.0}_{-4.3}$ (+0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4666	$0.467^{+0.022}_{-0.021}$ (-0.2 $\sigma$ )
$r_{143 \times 217}^{PS}$	0.492	$0.52^{+0.23}_{-0.23}$	$10^9 A_s$	2.104	$2.10^{+0.17}_{-0.17}$ (-0.0 $\sigma$ )	$\sigma_8(0.57)$	0.6021	$0.602^{+0.025}_{-0.024}$ (-0.0 $\sigma$ )
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8692	$1.868^{+0.023}_{-0.023}$ (-0.7 $\sigma$ )	$Y_P^{BBN}$	0.246372	$0.24636^{+0.00015}_{-0.00015}$ (-4.7 $\sigma$ )
$A^{kSZ}$	0.7	—	$D_{40}$	1213.5	$1215^{+28}_{-28}$ (-0.8 $\sigma$ )	$f_{2000}^{143}$	26.2	$26^{+5}_{-6}$ (-0.4 $\sigma$ )
$A_{100}^{dust}$	0.985	$0.99^{+0.37}_{-0.38}$	$D_{220}$	5719	$5715^{+77}_{-78}$ (-0.5 $\sigma$ )	$f_{2000}^{217}$	104.29	$104.6^{+3.9}_{-3.9}$ (+0.0 $\sigma$ )
$A_{143}^{dust}$	1.018	$1.02^{+0.35}_{-0.35}$	$D_{810}$	2526.8	$2525^{+27}_{-27}$ (-0.4 $\sigma$ )	$f_{2000}^{143 \times 217}$	29.47	$30^{+4}_{-4}$ (-0.5 $\sigma$ )
$A_{217}^{dust}$	1.205	$1.23^{+0.23}_{-0.23}$	$D_{1420}$	814.5	$813.6^{+9.2}_{-9.2}$ (+0.0 $\sigma$ )	$\chi_{lowTEB}^2$	10493.91	$10495.0 (\nu: 1.2)$ (-0.5 $\sigma$ )
$A_{143 \times 217}^{dust}$	0.986	$0.98^{+0.35}_{-0.34}$	$n_{s,0.002}$	0.9719	$0.9715^{+0.0096}_{-0.0094}$ (+0.7 $\sigma$ )	$\chi_{CamSpec}^2$	12935.3	$12951.6 (\nu: 17.6)$
$c_{100}$	0.99694	$0.9968^{+0.0019}_{-0.0019}$ (-1.8 $\sigma$ )	$Y_P$	0.245043	$0.24504^{+0.00015}_{-0.00015}$ (-4.8 $\sigma$ )	$\chi_{prior}^2$	2.8	$8.7 (\nu: 6.1)$ (-1.9 $\sigma$ )
$c_{217}$	0.99656	$0.9968^{+0.0034}_{-0.0035}$ (+0.7 $\sigma$ )	Age/Gyr	13.770	$13.772^{+0.058}_{-0.055}$ (-0.5 $\sigma$ )	$\chi_{CMB}^2$	23429.2	$23446.6 (\nu: 18.3)$ (+1541.2 $\sigma$ )
$c_{TE}$	1.0015	$1.0016^{+0.0093}_{-0.0090}$	$z_*$	1089.52	$1089.54^{+0.64}_{-0.61}$ (-0.6 $\sigma$ )			

Best-fit  $\chi_{eff}^2 = 23432.00$ ;  $\Delta\chi_{eff}^2 = 10501.51$ ;  $\bar{\chi}_{eff}^2 = 23455.37$ ;  $\Delta\bar{\chi}_{eff}^2 = 10491.59$ ;  $R - 1 = 0.01370$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.91 ( $\Delta$  -0.47) CamSpec like\_v9.10CMH\_unified: 12935.33

#### 4.5 base\_Alensf\_plikHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02266	$0.02256^{+0.00053}_{-0.00051}$	$\Omega_m$	0.2963	$0.300^{+0.025}_{-0.023}$	$D_A/\text{Gpc}$	13.923	$13.920^{+0.079}_{-0.080}$
$\Omega_c h^2$	0.11695	$0.1174^{+0.0040}_{-0.0040}$	$\Omega_m h^2$	0.14026	$0.1406^{+0.0037}_{-0.0037}$	$z_{\text{drag}}$	1060.39	$1060.2^{+1.1}_{-1.0}$
$100\theta_{\text{MC}}$	1.04128	$1.04119^{+0.00092}_{-0.00091}$	$\Omega_m h^3$	0.09650	$0.09635^{+0.00097}_{-0.00096}$	$r_{\text{drag}}$	147.58	$147.57^{+0.84}_{-0.85}$
$\tau$	0.0719	$0.069^{+0.033}_{-0.033}$	$\sigma_8$	0.8144	$0.813^{+0.019}_{-0.019}$	$k_D$	0.14058	$0.14051^{+0.00094}_{-0.00094}$
$A_L^{\text{fid}}$	1.103	$1.09^{+0.12}_{-0.12}$	$\sigma_8 \Omega_m^{0.5}$	0.4433	$0.445^{+0.018}_{-0.018}$	$100\theta_D$	0.16051	$0.16063^{+0.00058}_{-0.00057}$
$\ln(10^{10} A_s)$	3.073	$3.068^{+0.060}_{-0.059}$	$\sigma_8 \Omega_m^{0.25}$	0.6009	$0.602^{+0.016}_{-0.016}$	$z_{\text{eq}}$	3336	$3345^{+89}_{-87}$
$n_s$	0.9752	$0.972^{+0.013}_{-0.012}$	$\sigma_8/h^{0.5}$	0.9819	$0.982^{+0.023}_{-0.023}$	$k_{\text{eq}}$	0.010183	$0.01021^{+0.00027}_{-0.00027}$
$y_{\text{cal}}$	1.00020	$1.0002^{+0.0049}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.426	$2.431^{+0.053}_{-0.054}$	$100\theta_{\text{eq}}$	0.8264	$0.825^{+0.018}_{-0.017}$
$A_{217}^{\text{CIB}}$	58.1	$61^{+10}_{-10}$	$z_{\text{re}}$	9.25	$9.0^{+3.1}_{-3.2}$	$100\theta_{s,\text{eq}}$	0.4560	$0.4551^{+0.0089}_{-0.0088}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.90	—	$10^9 A_s$	2.160	$2.15^{+0.13}_{-0.12}$	$r_{\text{drag}}/D_V(0.57)$	0.07242	$0.0723^{+0.0014}_{-0.0014}$
$A_{143}^{\text{tSZ}}$	6.70	$5.6^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8709	$1.871^{+0.025}_{-0.025}$	$H(0.57)$	93.60	$93.46^{+0.91}_{-0.86}$
$A_{100}^{\text{PS}}$	236	$248^{+50}_{-60}$	$D_{40}$	1215.0	$1220^{+25}_{-25}$	$D_A(0.57)$	1371.2	$1375^{+25}_{-25}$
$A_{143}^{\text{PS}}$	45.2	$39^{+20}_{-20}$	$D_{220}$	5740	$5738^{+81}_{-82}$	$F_{\text{AP}}(0.57)$	0.6721	$0.6730^{+0.0063}_{-0.0061}$
$A_{143 \times 217}^{\text{PS}}$	53.7	$38^{+20}_{-20}$	$D_{810}$	2531.1	$2528^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4695	$0.470^{+0.011}_{-0.011}$
$A_{217}^{\text{PS}}$	107.6	$98^{+20}_{-20}$	$D_{1420}$	816.5	$814^{+10}_{-9.9}$	$\sigma_8(0.57)$	0.6096	$0.608^{+0.017}_{-0.017}$
$A^{\text{kSZ}}$	0.00	$< 7.18$	$D_{2000}$	233.42	$232.3^{+4.0}_{-3.9}$	$f_{2000}^{143}$	24.9	$27^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.37	$7.5^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9752	$0.972^{+0.013}_{-0.012}$	$f_{2000}^{143 \times 217}$	28.81	$30^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	8.97	$8.9^{+3.6}_{-3.6}$	$Y_P$	0.245522	$0.24548^{+0.00023}_{-0.00023}$	$f_{2000}^{217}$	102.46	$103.7^{+4.4}_{-4.4}$
$A_{143 \times 217}^{\text{dustTT}}$	18.0	$16.7^{+8.1}_{-8.1}$	$Y_P^{\text{BBN}}$	0.246849	$0.24680^{+0.00023}_{-0.00023}$	$\chi_{\text{lensing}}^2$	8.83	$9.7 (\nu: 0.9)$
$A_{217}^{\text{dustTT}}$	82.7	$82^{+10}_{-10}$	$10^5 D/H$	2.537	$2.556^{+0.096}_{-0.094}$	$\chi_{\text{lowTEB}}^2$	10494.05	$10495.1 (\nu: 0.8)$
$c_{100}$	0.99805	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.744	$13.758^{+0.082}_{-0.083}$	$\chi_{\text{plik}}^2$	760.6	$774.4 (\nu: 14.4)$
$c_{217}$	0.99535	$0.9956^{+0.0029}_{-0.0029}$	$z_*$	1089.29	$1089.46^{+0.90}_{-0.88}$	$\chi_{\text{prior}}^2$	1.3	$7.1 (\nu: 5.9)$
$H_0$	68.80	$68.5^{+1.9}_{-1.9}$	$r_*$	145.00	$144.96^{+0.85}_{-0.86}$	$\chi_{\text{CMB}}^2$	11263.5	$11279.1 (\nu: 16.5)$
$\Omega_\Lambda$	0.7037	$0.700^{+0.023}_{-0.025}$	$100\theta_*$	1.04143	$1.04136^{+0.00090}_{-0.00089}$			

Best-fit  $\chi_{\text{eff}}^2 = 11264.76$ ;  $\bar{\chi}_{\text{eff}}^2 = 11286.25$ ;  $R - 1 = 0.00753$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 8.83 lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.05 plik\_dx11dr2\_HM\_v18.TT: 760.60



#### 4.6 base\_Alensf\_plikHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022432	$0.02240^{+0.00033}_{-0.00032}$	$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.17}_{-0.17}$	Age/Gyr	13.784	$13.789^{+0.052}_{-0.054}$
$\Omega_c h^2$	0.11834	$0.1185^{+0.0028}_{-0.0028}$	$A_{143}^{\text{dustTE}}$	0.152	$0.15^{+0.11}_{-0.10}$	$z_*$	1089.70	$1089.76^{+0.60}_{-0.60}$
$100\theta_{\text{MC}}$	1.04094	$1.04090^{+0.00063}_{-0.00063}$	$A_{143 \times 217}^{\text{dustTE}}$	0.335	$0.34^{+0.16}_{-0.16}$	$r_*$	144.81	$144.79^{+0.60}_{-0.60}$
$\tau$	0.0616	$0.059^{+0.028}_{-0.028}$	$A_{217}^{\text{dustTE}}$	1.65	$1.65^{+0.51}_{-0.50}$	$100\theta_*$	1.04111	$1.04109^{+0.00062}_{-0.00062}$
$A_L^{\text{fid}}$	1.067	$1.059^{+0.095}_{-0.091}$	$c_{100}$	0.99825	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.909	$13.908^{+0.056}_{-0.055}$
$\ln(10^{10} A_s)$	3.055	$3.051^{+0.052}_{-0.051}$	$c_{217}$	0.99561	$0.9957^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.97	$1059.90^{+0.65}_{-0.65}$
$n_s$	0.9694	$0.9680^{+0.0093}_{-0.0094}$	$H_0$	68.00	$67.9^{+1.3}_{-1.3}$	$r_{\text{drag}}$	147.46	$147.45^{+0.58}_{-0.58}$
$y_{\text{cal}}$	0.99993	$1.0001^{+0.0050}_{-0.0049}$	$\Omega_\Lambda$	0.6941	$0.693^{+0.017}_{-0.017}$	$k_D$	0.14052	$0.14051^{+0.00061}_{-0.00062}$
$A_{217}^{\text{CIB}}$	61.4	$62^{+10}_{-10}$	$\Omega_m$	0.3059	$0.307^{+0.017}_{-0.017}$	$100\theta_D$	0.160726	$0.16077^{+0.00037}_{-0.00037}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.62	—	$\Omega_m h^2$	0.14142	$0.1416^{+0.0026}_{-0.0026}$	$z_{\text{eq}}$	3364	$3368^{+62}_{-62}$
$A_{143}^{\text{tSZ}}$	6.85	$5.6^{+3.4}_{-3.7}$	$\Omega_m h^3$	0.09616	$0.09611^{+0.00060}_{-0.00057}$	$k_{\text{eq}}$	0.010267	$0.01028^{+0.00019}_{-0.00019}$
$A_{100}^{\text{PS}}$	245	$254^{+50}_{-50}$	$\sigma_8$	0.8110	$0.810^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	0.8204	$0.820^{+0.012}_{-0.012}$
$A_{143}^{\text{PS}}$	44.3	$41^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4485	$0.449^{+0.014}_{-0.014}$	$100\theta_{s,\text{eq}}$	0.4530	$0.4527^{+0.0062}_{-0.0061}$
$A_{143 \times 217}^{\text{PS}}$	48.5	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6031	$0.603^{+0.014}_{-0.014}$	$r_{\text{drag}}/D_V(0.57)$	0.07187	$0.07181^{+0.00097}_{-0.00095}$
$A_{217}^{\text{PS}}$	104.6	$99^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9835	$0.983^{+0.022}_{-0.022}$	$H(0.57)$	93.19	$93.14^{+0.59}_{-0.56}$
$A^{\text{kSZ}}$	0.00	$< 7.11$	$\langle d^2 \rangle^{1/2}$	2.432	$2.433^{+0.052}_{-0.052}$	$D_A(0.57)$	1382.3	$1384^{+17}_{-17}$
$A_{100}^{\text{dustTT}}$	7.29	$7.4^{+3.7}_{-3.7}$	$z_{\text{re}}$	8.36	$8.1^{+2.8}_{-2.8}$	$F_{\text{AP}}(0.57)$	0.67460	$0.6749^{+0.0044}_{-0.0043}$
$A_{143}^{\text{dustTT}}$	8.90	$8.8^{+3.6}_{-3.6}$	$10^9 A_s$	2.122	$2.11^{+0.11}_{-0.11}$	$f\sigma_8(0.57)$	0.4701	$0.470^{+0.011}_{-0.010}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$16.6^{+8.1}_{-8.1}$	$10^9 A_s e^{-2\tau}$	1.8761	$1.877^{+0.023}_{-0.022}$	$\sigma_8(0.57)$	0.6047	$0.603^{+0.015}_{-0.015}$
$A_{217}^{\text{dustTT}}$	82.0	$81^{+10}_{-10}$	$D_{40}$	1223.2	$1226^{+23}_{-23}$	$f_{2000}^{143}$	26.8	$28^{+5}_{-5}$
$A_{100}^{\text{dustEE}}$	0.0817	$0.082^{+0.011}_{-0.011}$	$D_{220}$	5733	$5736^{+77}_{-75}$	$f_{2000}^{143 \times 217}$	30.35	$31^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0494	$0.0492^{+0.0098}_{-0.0098}$	$D_{810}$	2531.5	$2531^{+27}_{-27}$	$f_{2000}^{217}$	103.89	$104.5^{+3.8}_{-3.7}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.0998^{+0.064}_{-0.063}$	$D_{1420}$	814.5	$813.8^{+9.7}_{-9.5}$	$\chi_{\text{lensing}}^2$	8.77	$9.6 (\nu: 0.7)$
$A_{143}^{\text{dustEE}}$	0.1008	$0.101^{+0.014}_{-0.013}$	$D_{2000}$	231.75	$231.3^{+3.3}_{-3.3}$	$\chi_{\text{lowTEB}}^2$	10494.61	$10495.4 (\nu: 0.6)$
$A_{143 \times 217}^{\text{dustEE}}$	0.222	$0.223^{+0.093}_{-0.092}$	$n_{s,0.002}$	0.9694	$0.9680^{+0.0093}_{-0.0094}$	$\chi_{\text{plik}}^2$	2429.3	$2448.6 (\nu: 21.5)$
$A_{217}^{\text{dustEE}}$	0.652	$0.65^{+0.25}_{-0.25}$	$Y_P$	0.245420	$0.24541^{+0.00014}_{-0.00015}$	$\chi_{\text{prior}}^2$	6.6	$19.2 (\nu: 14.9)$
$A_{100}^{\text{dustTE}}$	0.142	$0.141^{+0.075}_{-0.075}$	$Y_P^{\text{BBN}}$	0.246747	$0.24673^{+0.00015}_{-0.00015}$	$\chi_{\text{CMB}}^2$	12932.7	$12953.5 (\nu: 23.3)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.058}_{-0.058}$	$10^5 \text{D}/\text{H}$	2.580	$2.586^{+0.061}_{-0.061}$			

Best-fit  $\chi_{\text{eff}}^2 = 12939.35$ ;  $\bar{\chi}_{\text{eff}}^2 = 12972.78$ ;  $R - 1 = 0.01140$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 8.78 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.61 plik\_dx11dr2\_HM\_v18.TTTEEE: 2429.34

#### 4.7 base\_Alensf\_CamSpecHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02257	$0.02257^{+0.00053}_{-0.00051}$ (+0.0 $\sigma$ )	$H_0$	68.60	$68.6^{+2.0}_{-1.9}$ (+0.1 $\sigma$ )	$z_{\text{drag}}$	1060.20	$1060.2^{+1.0}_{-1.0}$ (-0.0 $\sigma$ )
$\Omega_c h^2$	0.11727	$0.1173^{+0.0041}_{-0.0040}$ (-0.1 $\sigma$ )	$\Omega_\Lambda$	0.7014	$0.701^{+0.024}_{-0.025}$ (+0.1 $\sigma$ )	$r_{\text{drag}}$	147.59	$147.59^{+0.83}_{-0.85}$ (+0.1 $\sigma$ )
$100\theta_{\text{MC}}$	1.04123	$1.04124^{+0.00094}_{-0.00093}$ (+0.1 $\sigma$ )	$\Omega_m$	0.2986	$0.299^{+0.025}_{-0.024}$ (-0.1 $\sigma$ )	$k_D$	0.14050	$0.14050^{+0.00095}_{-0.00091}$ (-0.0 $\sigma$ )
$\tau$	0.0721	$0.072^{+0.034}_{-0.033}$ (+0.2 $\sigma$ )	$\Omega_m h^2$	0.14048	$0.1405^{+0.0038}_{-0.0037}$ (-0.1 $\sigma$ )	$100\theta_D$	0.16060	$0.16061^{+0.00059}_{-0.00057}$ (-0.0 $\sigma$ )
$A_L^{\text{fid}}$	1.087	$1.08^{+0.12}_{-0.12}$ (-0.1 $\sigma$ )	$\Omega_m h^3$	0.09637	$0.09636^{+0.00097}_{-0.00093}$ (+0.0 $\sigma$ )	$z_{\text{eq}}$	3342	$3342^{+90}_{-88}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.071	$3.072^{+0.060}_{-0.059}$ (+0.1 $\sigma$ )	$\sigma_8$	0.8155	$0.815^{+0.019}_{-0.019}$ (+0.2 $\sigma$ )	$100\theta_{\text{eq}}$	0.8251	$0.825^{+0.018}_{-0.017}$ (+0.1 $\sigma$ )
$n_s$	0.9748	$0.974^{+0.013}_{-0.013}$ (+0.3 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4456	$0.446^{+0.018}_{-0.018}$ (+0.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07230	$0.0723^{+0.0015}_{-0.0014}$ (+0.1 $\sigma$ )
$y_{\text{cal}}$	1.00018	$1.0002^{+0.0048}_{-0.0049}$ (+0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6028	$0.603^{+0.016}_{-0.015}$ (+0.2 $\sigma$ )	$H(0.57)$	93.48	$93.49^{+0.94}_{-0.86}$ (+0.1 $\sigma$ )
$A_{100}^{\text{PS}}$	232.4	$235^{+40}_{-40}$ (-0.4 $\sigma$ )	$\sigma_8/h^{0.5}$	0.9846	$0.985^{+0.023}_{-0.022}$ (+0.2 $\sigma$ )	$D_A(0.57)$	1374.1	$1374^{+26}_{-26}$ (-0.1 $\sigma$ )
$A_{143}^{\text{PS}}$	32.1	$34^{+20}_{-20}$ (-0.6 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.429	$2.431^{+0.053}_{-0.053}$ (-0.0 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6727	$0.6728^{+0.0064}_{-0.0062}$ (-0.1 $\sigma$ )
$A_{217}^{\text{PS}}$	103.4	$101^{+30}_{-30}$ (+0.2 $\sigma$ )	$z_{\text{re}}$	9.31	$9.3^{+3.0}_{-3.1}$ (+0.2 $\sigma$ )	$f\sigma_8(0.57)$	0.4707	$0.471^{+0.011}_{-0.011}$ (+0.2 $\sigma$ )
$A_{217}^{\text{CIB}}$	45.4	$43^{+10}_{-10}$ (-2.8 $\sigma$ )	$10^9 A_s$	2.157	$2.16^{+0.13}_{-0.13}$ (+0.1 $\sigma$ )	$\sigma_8(0.57)$	0.6098	$0.610^{+0.017}_{-0.017}$ (+0.2 $\sigma$ )
$A_{143}^{\text{tSZ}}$	5.61	$< 7.08$ (-1.0 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.8675	$1.867^{+0.025}_{-0.025}$ (-0.3 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246389	$0.24639^{+0.00022}_{-0.00022}$ (-3.6 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.497	$0.53^{+0.25}_{-0.23}$	$D_{40}$	1212.0	$1214^{+26}_{-25}$ (-0.5 $\sigma$ )	$f_{2000}^{143}$	25.2	$26^{+6}_{-7}$ (-0.4 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.02	—	$D_{220}$	5716	$5717^{+82}_{-82}$ (-0.5 $\sigma$ )	$f_{2000}^{217}$	103.74	$104.0^{+4.5}_{-4.5}$ (+0.2 $\sigma$ )
$A^{\text{kSZ}}$	0.5	—	$D_{810}$	2526.3	$2526^{+27}_{-27}$ (-0.2 $\sigma$ )	$f_{2000}^{143 \times 217}$	28.72	$29^{+5}_{-5}$ (-0.4 $\sigma$ )
$A_{100}^{\text{dust}}$	0.992	$0.99^{+0.38}_{-0.38}$	$D_{1420}$	815.0	$815^{+10}_{-10}$ (+0.1 $\sigma$ )	$\chi_{\text{lensing}}^2$	8.87	$9.7 (\nu: 0.9)$ (+0.0 $\sigma$ )
$A_{143}^{\text{dust}}$	1.008	$1.02^{+0.36}_{-0.36}$	$n_{\text{s}, 0.002}$	0.9748	$0.974^{+0.013}_{-0.013}$ (+0.3 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10493.93	$10494.7 (\nu: 0.8)$ (-0.3 $\sigma$ )
$A_{217}^{\text{dust}}$	1.218	$1.23^{+0.23}_{-0.23}$	$Y_{\text{P}}$	0.245062	$0.24506^{+0.00022}_{-0.00022}$ (-3.6 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	8042.7	$8057.0 (\nu: 15.3)$
$A_{143 \times 217}^{\text{dust}}$	0.986	$0.97^{+0.35}_{-0.35}$	Age/Gyr	13.756	$13.756^{+0.081}_{-0.086}$ (-0.1 $\sigma$ )	$\chi_{\text{prior}}^2$	2.9	$8.4 (\nu: 6.0)$ (+0.4 $\sigma$ )
$c_{100}$	0.99695	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	$z_*$	1089.42	$1089.43^{+0.89}_{-0.90}$ (-0.1 $\sigma$ )	$\chi_{\text{CMB}}^2$	18545.5	$18561.4 (\nu: 17.1)$ (+1268.0 $\sigma$ )
$c_{217}$	0.99660	$0.9968^{+0.0035}_{-0.0035}$ (+0.8 $\sigma$ )	$r_*$	144.99	$144.99^{+0.85}_{-0.87}$ (+0.1 $\sigma$ )			
$\beta_1^1$	-0.05	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	1.04141	$1.04142^{+0.00092}_{-0.00090}$ (+0.1 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 18548.40$ ;  $\Delta\chi_{\text{eff}}^2 = 7283.64$ ;  $\bar{\chi}_{\text{eff}}^2 = 18569.82$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7283.56$ ;  $R - 1 = 0.00769$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 8.87 ( $\Delta$  0.04) lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.93 ( $\Delta$  -0.12) CamSpec like\_v9.10CMH\_unified: 8042.74

#### 4.8 base\_Alensf\_CamSpecHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022508	$0.02250^{+0.00035}_{-0.00034}$ $(+0.6\sigma)$	$\mathcal{C}_{EE}$	1.0001	$1.0002^{+0.0081}_{-0.0082}$	$r_*$	144.85	$144.84^{+0.58}_{-0.58}$ $(+0.2\sigma)$
$\Omega_c h^2$	0.11799	$0.1180^{+0.0027}_{-0.0027}$ $(-0.3\sigma)$	$\beta_1^1$	-0.07	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	1.04113	$1.04114^{+0.00060}_{-0.00060}$ $(+0.2\sigma)$
$100\theta_{MC}$	1.04095	$1.04096^{+0.00061}_{-0.00061}$ $(+0.2\sigma)$	$H_0$	68.19	$68.2^{+1.3}_{-1.3}$ $(+0.4\sigma)$	$z_{drag}$	1060.09	$1060.07^{+0.71}_{-0.67}$ $(+0.5\sigma)$
$\tau$	0.0648	$0.065^{+0.027}_{-0.026}$ $(+0.4\sigma)$	$\Omega_\Lambda$	0.6965	$0.696^{+0.016}_{-0.017}$ $(+0.4\sigma)$	$r_{drag}$	147.47	$147.47^{+0.57}_{-0.58}$ $(+0.1\sigma)$
$A_L^{fid}$	1.038	$1.036^{+0.097}_{-0.092}$ $(-0.5\sigma)$	$\Omega_m$	0.3035	$0.304^{+0.017}_{-0.016}$ $(-0.4\sigma)$	$k_D$	0.14058	$0.14058^{+0.00064}_{-0.00064}$ $(+0.2\sigma)$
$\ln(10^{10} A_s)$	3.0578	$3.057^{+0.050}_{-0.049}$ $(+0.2\sigma)$	$\Omega_m h^2$	0.14114	$0.1412^{+0.0025}_{-0.0025}$ $(-0.3\sigma)$	$100\theta_D$	0.160621	$0.16064^{+0.00039}_{-0.00040}$ $(-0.7\sigma)$
$n_s$	0.9715	$0.9710^{+0.0096}_{-0.0094}$ $(+0.6\sigma)$	$\Omega_m h^3$	0.09624	$0.09623^{+0.00061}_{-0.00061}$ $(+0.4\sigma)$	$z_{eq}$	3357	$3358^{+61}_{-59}$ $(-0.3\sigma)$
$y_{cal}$	0.99998	$1.0000^{+0.0050}_{-0.0049}$ $(-0.1\sigma)$	$\sigma_8$	0.8114	$0.811^{+0.018}_{-0.017}$ $(+0.2\sigma)$	$100\theta_{eq}$	0.8218	$0.822^{+0.012}_{-0.012}$ $(+0.3\sigma)$
$A_{100}^{PS}$	236.1	$239^{+40}_{-40}$ $(-0.5\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4470	$0.447^{+0.014}_{-0.014}$ $(-0.2\sigma)$	$r_{drag}/D_V(0.57)$	0.07200	$0.07198^{+0.00096}_{-0.00094}$ $(+0.4\sigma)$
$A_{143}^{PS}$	33.5	$36^{+20}_{-20}$ $(-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.6023	$0.602^{+0.014}_{-0.014}$ $(-0.1\sigma)$	$H(0.57)$	93.29	$93.28^{+0.60}_{-0.58}$ $(+0.5\sigma)$
$A_{217}^{PS}$	102.7	$100^{+30}_{-30}$ $(+0.1\sigma)$	$\sigma_8/h^{0.5}$	0.9826	$0.983^{+0.021}_{-0.021}$ $(-0.0\sigma)$	$D_A(0.57)$	1379.6	$1380^{+17}_{-17}$ $(-0.4\sigma)$
$A_{217}^{CIB}$	46.0	$44^{+10}_{-10}$ $(-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	2.427	$2.428^{+0.050}_{-0.051}$ $(-0.2\sigma)$	$F_{AP}(0.57)$	0.67400	$0.6741^{+0.0043}_{-0.0042}$ $(-0.4\sigma)$
$A_{143}^{tSZ}$	5.40	$< 7.07$ $(-1.0\sigma)$	$z_{re}$	8.64	$8.6^{+2.4}_{-2.6}$ $(+0.3\sigma)$	$f\sigma_8(0.57)$	0.4697	$0.470^{+0.010}_{-0.010}$ $(+0.0\sigma)$
$r_{143 \times 217}^{PS}$	0.485	$0.53^{+0.24}_{-0.23}$	$10^9 A_s$	2.128	$2.13^{+0.11}_{-0.10}$ $(+0.2\sigma)$	$\sigma_8(0.57)$	0.6056	$0.605^{+0.015}_{-0.014}$ $(+0.3\sigma)$
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8696	$1.869^{+0.022}_{-0.023}$ $(-0.6\sigma)$	$Y_P^{BBN}$	0.246364	$0.24636^{+0.00015}_{-0.00015}$ $(-5.0\sigma)$
$A^{kSZ}$	1.0	—	$D_{40}$	1216.1	$1217^{+23}_{-23}$ $(-0.8\sigma)$	$f_{2000}^{143}$	26.4	$27^{+6}_{-6}$ $(-0.4\sigma)$
$A_{100}^{dust}$	0.984	$0.99^{+0.38}_{-0.37}$	$D_{220}$	5717	$5717^{+76}_{-75}$ $(-0.5\sigma)$	$f_{2000}^{217}$	104.50	$104.7^{+3.8}_{-3.9}$ $(+0.1\sigma)$
$A_{143}^{dust}$	1.008	$1.02^{+0.35}_{-0.36}$	$D_{810}$	2526.8	$2526^{+26}_{-27}$ $(-0.4\sigma)$	$f_{2000}^{143 \times 217}$	29.59	$30^{+4}_{-4}$ $(-0.5\sigma)$
$A_{217}^{dust}$	1.215	$1.22^{+0.22}_{-0.23}$	$D_{1420}$	814.4	$814.0^{+9.6}_{-9.6}$ $(+0.0\sigma)$	$\chi_{lensing}^2$	8.76	$9.6 (\nu: 0.7)$ $(-0.1\sigma)$
$A_{143 \times 217}^{dust}$	0.990	$0.97^{+0.35}_{-0.36}$	$n_{s,0.002}$	0.9715	$0.9710^{+0.0096}_{-0.0094}$ $(+0.6\sigma)$	$\chi_{lowTEB}^2$	10494.11	$10494.66 (\nu: 0.5)$ $(-0.6\sigma)$
$c_{100}$	0.99693	$0.9968^{+0.0019}_{-0.0019}$ $(-1.8\sigma)$	$Y_P$	0.245034	$0.24503^{+0.00015}_{-0.00015}$ $(-5.0\sigma)$	$\chi_{CamSpec}^2$	12935.1	$12951.3 (\nu: 17.3)$
$c_{217}$	0.99665	$0.9968^{+0.0034}_{-0.0035}$ $(+0.7\sigma)$	Age/Gyr	13.774	$13.775^{+0.054}_{-0.055}$ $(-0.5\sigma)$	$\chi_{prior}^2$	2.9	$8.8 (\nu: 6.1)$ $(-1.9\sigma)$
$\mathcal{C}_{TE}$	1.0017	$1.0018^{+0.0091}_{-0.0091}$	$z_*$	1089.55	$1089.58^{+0.60}_{-0.61}$ $(-0.6\sigma)$	$\chi_{CMB}^2$	23438.0	$23455.5 (\nu: 18.8)$ $(+1539.6\sigma)$

Best-fit  $\chi_{eff}^2 = 23440.85$ ;  $\Delta\chi_{eff}^2 = 10501.50$ ;  $\bar{\chi}_{eff}^2 = 23464.24$ ;  $\Delta\bar{\chi}_{eff}^2 = 10491.46$ ;  $R - 1 = 0.01679$

$\chi_{eff}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 8.76 ( $\Delta$  -0.02) low1.SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.11 ( $\Delta$  -0.50) CamSpec like\_v9.10CMH\_unified: 12935.10

## 5 Aphihi

### 5.1 base\_Aphihi\_plikHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022264	$0.02224^{+0.00045}_{-0.00045}$	$\Omega_m$	0.3127	$0.313^{+0.027}_{-0.025}$	$D_A/\text{Gpc}$	13.895	$13.896^{+0.088}_{-0.088}$
$\Omega_c h^2$	0.11942	$0.1195^{+0.0042}_{-0.0042}$	$\Omega_m h^2$	0.14233	$0.1424^{+0.0040}_{-0.0040}$	$z_{\text{drag}}$	1059.67	$1059.60^{+0.95}_{-0.92}$
$100\theta_{\text{MC}}$	1.04090	$1.04087^{+0.00092}_{-0.00095}$	$\Omega_m h^3$	0.09602	$0.09598^{+0.00092}_{-0.00091}$	$r_{\text{drag}}$	147.36	$147.37^{+0.96}_{-0.95}$
$\tau$	0.0796	$0.078^{+0.039}_{-0.037}$	$\sigma_8$	0.8298	$0.829^{+0.029}_{-0.028}$	$k_D$	0.14050	$0.1405^{+0.0010}_{-0.0010}$
$\ln(10^{10} A_s)$	3.092	$3.089^{+0.072}_{-0.070}$	$\sigma_8 \Omega_m^{0.5}$	0.4640	$0.464^{+0.026}_{-0.025}$	$100\theta_D$	0.16092	$0.16095^{+0.00053}_{-0.00053}$
$n_s$	0.9665	$0.966^{+0.012}_{-0.012}$	$\sigma_8 \Omega_m^{0.25}$	0.6205	$0.620^{+0.025}_{-0.025}$	$z_{\text{eq}}$	3386	$3387^{+96}_{-95}$
$A_L^{\phi\phi}$	0.947	$0.950^{+0.082}_{-0.075}$	$\sigma_8/h^{0.5}$	1.0103	$1.009^{+0.038}_{-0.038}$	$k_{\text{eq}}$	0.010334	$0.01034^{+0.00029}_{-0.00029}$
$y_{\text{cal}}$	1.00024	$1.0004^{+0.0048}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.496	$2.495^{+0.090}_{-0.089}$	$100\theta_{\text{eq}}$	0.8159	$0.816^{+0.018}_{-0.018}$
$A_{217}^{\text{CIB}}$	66.8	$64^{+10}_{-10}$	$z_{\text{re}}$	10.12	$9.9^{+3.2}_{-3.6}$	$100\theta_{\text{s,eq}}$	0.4508	$0.4508^{+0.0094}_{-0.0092}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.04	—	$10^9 A_s$	2.203	$2.20^{+0.16}_{-0.15}$	$r_{\text{drag}}/D_V(0.57)$	0.07151	$0.0715^{+0.0015}_{-0.0014}$
$A_{143}^{\text{tSZ}}$	7.18	$5.1^{+3.7}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8786	$1.879^{+0.027}_{-0.027}$	$H(0.57)$	92.94	$92.92^{+0.83}_{-0.78}$
$A_{100}^{\text{PS}}$	252	$258^{+50}_{-60}$	$D_{40}$	1234.7	$1236^{+30}_{-29}$	$D_A(0.57)$	1389.5	$1390^{+25}_{-25}$
$A_{143}^{\text{PS}}$	38.9	$44^{+20}_{-20}$	$D_{220}$	5717	$5719^{+80}_{-79}$	$F_{\text{AP}}(0.57)$	0.6763	$0.6765^{+0.0067}_{-0.0064}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{810}$	2533.6	$2534^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4828	$0.482^{+0.018}_{-0.018}$
$A_{217}^{\text{PS}}$	97.6	$97^{+20}_{-20}$	$D_{1420}$	814.8	$814.6^{+9.8}_{-9.8}$	$\sigma_8(0.57)$	0.6170	$0.616^{+0.022}_{-0.021}$
$A^{\text{kSZ}}$	0.00	$< 8.22$	$D_{2000}$	230.49	$230.4^{+3.6}_{-3.5}$	$f_{2000}^{143}$	29.5	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.44	$7.4^{+3.7}_{-3.7}$	$n_{\text{s},0.002}$	0.9665	$0.966^{+0.012}_{-0.012}$	$f_{2000}^{143 \times 217}$	32.14	$32^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.07	$9.0^{+3.6}_{-3.7}$	$Y_{\text{P}}$	0.245346	$0.24533^{+0.00020}_{-0.00020}$	$f_{2000}^{217}$	105.77	$105.9^{+4.0}_{-4.0}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.1^{+8.1}_{-8.2}$	$Y_{\text{P}}^{\text{BBN}}$	0.246672	$0.24666^{+0.00020}_{-0.00020}$	$\chi^2_{\text{lensing}}$	8.83	$9.9 (\nu: 1.0)$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	2.611	$2.616^{+0.087}_{-0.085}$	$\chi^2_{\text{lowTEB}}$	10496.47	$10497.3 (\nu: 2.7)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	$\text{Age}/\text{Gyr}$	13.806	$13.809^{+0.074}_{-0.076}$	$\chi^2_{\text{plik}}$	763.4	$777.3 (\nu: 16.1)$
$c_{217}$	0.99591	$0.9959^{+0.0028}_{-0.0028}$	$z_*$	1090.01	$1090.04^{+0.84}_{-0.82}$	$\chi^2_{\text{prior}}$	2.1	$7.3 (\nu: 6.2)$
$H_0$	67.46	$67.4^{+1.9}_{-1.9}$	$r_*$	144.66	$144.66^{+0.96}_{-0.96}$	$\chi^2_{\text{CMB}}$	11268.7	$11284.5 (\nu: 16.3)$
$\Omega_\Lambda$	0.6873	$0.687^{+0.025}_{-0.027}$	$100\theta_*$	1.04110	$1.04107^{+0.00090}_{-0.00093}$			

Best-fit  $\chi^2_{\text{eff}} = 11270.78$ ;  $\bar{\chi}^2_{\text{eff}} = 11291.72$ ;  $R - 1 = 0.00620$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 8.83 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.47 plik\_dx11dr2\_HM\_v18\_TT: 763.43

## 5.2 base\_Aphiphi\_plikHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022262	$0.02226^{+0.00031}_{-0.00030}$	$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.17}_{-0.17}$	Age/Gyr	13.811	$13.812^{+0.051}_{-0.051}$
$\Omega_c h^2$	0.11970	$0.1198^{+0.0029}_{-0.0028}$	$A_{143}^{\text{dustTE}}$	0.156	$0.15^{+0.11}_{-0.11}$	$z_*$	1090.03	$1090.04^{+0.58}_{-0.57}$
$100\theta_{\text{MC}}$	1.04078	$1.04078^{+0.00062}_{-0.00065}$	$A_{143 \times 217}^{\text{dustTE}}$	0.338	$0.34^{+0.16}_{-0.16}$	$r_*$	144.59	$144.58^{+0.62}_{-0.63}$
$\tau$	0.0805	$0.079^{+0.034}_{-0.033}$	$A_{217}^{\text{dustTE}}$	1.67	$1.67^{+0.50}_{-0.50}$	$100\theta_*$	1.04097	$1.04097^{+0.00061}_{-0.00064}$
$\ln(10^{10} A_s)$	3.096	$3.093^{+0.064}_{-0.064}$	$c_{100}$	0.99822	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.890	$13.889^{+0.058}_{-0.058}$
$n_s$	0.9655	$0.9647^{+0.0094}_{-0.0095}$	$c_{217}$	0.99595	$0.9960^{+0.0029}_{-0.0028}$	$z_{\text{drag}}$	1059.67	$1059.66^{+0.62}_{-0.60}$
$A_L^{\phi\phi}$	0.938	$0.940^{+0.070}_{-0.067}$	$H_0$	67.32	$67.3^{+1.3}_{-1.3}$	$r_{\text{drag}}$	147.29	$147.28^{+0.62}_{-0.62}$
$y_{\text{cal}}$	1.00037	$1.0004^{+0.0050}_{-0.0048}$	$\Omega_\Lambda$	0.6853	$0.685^{+0.017}_{-0.018}$	$k_D$	0.14057	$0.14058^{+0.00065}_{-0.00064}$
$A_{217}^{\text{CIB}}$	65.4	$64^{+10}_{-10}$	$\Omega_m$	0.3147	$0.315^{+0.018}_{-0.017}$	$100\theta_D$	0.160896	$0.16090^{+0.00035}_{-0.00036}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.24	—	$\Omega_m h^2$	0.14261	$0.1427^{+0.0027}_{-0.0027}$	$z_{\text{eq}}$	3393	$3394^{+65}_{-64}$
$A_{143}^{\text{tSZ}}$	7.06	$5.4^{+3.6}_{-3.8}$	$\Omega_m h^3$	0.09601	$0.09601^{+0.00059}_{-0.00058}$	$k_{\text{eq}}$	0.010354	$0.01036^{+0.00020}_{-0.00019}$
$A_{100}^{\text{PS}}$	254	$259^{+50}_{-50}$	$\sigma_8$	0.8319	$0.831^{+0.026}_{-0.025}$	$100\theta_{\text{eq}}$	0.8146	$0.814^{+0.012}_{-0.012}$
$A_{143}^{\text{PS}}$	41.8	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4666	$0.466^{+0.019}_{-0.019}$	$100\theta_{s,\text{eq}}$	0.4502	$0.4500^{+0.0062}_{-0.0063}$
$A_{143 \times 217}^{\text{PS}}$	39.5	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6230	$0.622^{+0.020}_{-0.021}$	$r_{\text{drag}}/D_V(0.57)$	0.07140	$0.07138^{+0.00096}_{-0.00097}$
$A_{217}^{\text{PS}}$	100.2	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0138	$1.013^{+0.031}_{-0.032}$	$H(0.57)$	92.88	$92.88^{+0.56}_{-0.54}$
$A^{\text{kSZ}}$	0.00	$< 7.73$	$\langle d^2 \rangle^{1/2}$	2.506	$2.505^{+0.075}_{-0.075}$	$D_A(0.57)$	1391.5	$1392^{+17}_{-17}$
$A_{100}^{\text{dustTT}}$	7.37	$7.4^{+3.6}_{-3.7}$	$z_{\text{re}}$	10.20	$10.0^{+3.1}_{-3.1}$	$F_{\text{AP}}(0.57)$	0.67683	$0.6769^{+0.0046}_{-0.0044}$
$A_{143}^{\text{dustTT}}$	8.92	$8.9^{+3.6}_{-3.6}$	$10^9 A_s$	2.211	$2.21^{+0.15}_{-0.14}$	$f\sigma_8(0.57)$	0.4845	$0.484^{+0.015}_{-0.015}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.0^{+8.1}_{-8.1}$	$10^9 A_s e^{-2\tau}$	1.8821	$1.882^{+0.024}_{-0.023}$	$\sigma_8(0.57)$	0.6181	$0.617^{+0.020}_{-0.020}$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$D_{40}$	1239.2	$1241^{+26}_{-25}$	$f_{2000}^{143}$	28.9	$29^{+5}_{-5}$
$A_{100}^{\text{dustEE}}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5727	$5729^{+79}_{-76}$	$f_{2000}^{143 \times 217}$	31.97	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0487	$0.0488^{+0.0098}_{-0.0097}$	$D_{810}$	2536.4	$2536^{+27}_{-26}$	$f_{2000}^{217}$	105.53	$105.8^{+3.6}_{-3.7}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.0996^{+0.065}_{-0.063}$	$D_{1420}$	815.3	$814.8^{+9.5}_{-9.2}$	$\chi^2_{\text{lensing}}$	8.84	$9.8 (\nu: 1.0)$
$A_{143}^{\text{dustEE}}$	0.1002	$0.100^{+0.013}_{-0.014}$	$D_{2000}$	230.67	$230.5^{+3.2}_{-3.1}$	$\chi^2_{\text{lowTEB}}$	10496.95	$10497.7 (\nu: 2.3)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.224^{+0.092}_{-0.092}$	$n_{s,0.002}$	0.9655	$0.9647^{+0.0094}_{-0.0095}$	$\chi^2_{\text{plik}}$	2431.9	$2450.5 (\nu: 22.8)$
$A_{217}^{\text{dustEE}}$	0.652	$0.65^{+0.25}_{-0.26}$	$Y_P$	0.245345	$0.24534^{+0.00014}_{-0.00014}$	$\chi^2_{\text{prior}}$	6.7	$19.4 (\nu: 15.3)$
$A_{100}^{\text{dustTE}}$	0.140	$0.141^{+0.074}_{-0.074}$	$Y_P^{\text{BBN}}$	0.246671	$0.24667^{+0.00014}_{-0.00014}$	$\chi^2_{\text{CMB}}$	12937.7	$12958.1 (\nu: 23.0)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.131^{+0.057}_{-0.058}$	$10^5 \text{D}/\text{H}$	2.612	$2.612^{+0.057}_{-0.058}$			

Best-fit  $\chi^2_{\text{eff}} = 12944.37$ ;  $\bar{\chi}^2_{\text{eff}} = 12977.44$ ;  $R - 1 = 0.01215$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 8.84 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.95 plik\_dx11dr2\_HM\_v18.TTTEEE: 2431.88

## 6 alpha1

### 6.1 base\_alpha1\_plikHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022343	$0.02239^{+0.00050}_{-0.00048}$	$\Omega_m$	0.3177	$0.319^{+0.029}_{-0.027}$	$D_A/\text{Gpc}$	13.873	$13.868^{+0.094}_{-0.093}$
$\Omega_c h^2$	0.12025	$0.1204^{+0.0045}_{-0.0045}$	$\Omega_m h^2$	0.14324	$0.1434^{+0.0043}_{-0.0043}$	$z_{\text{drag}}$	1059.89	$1060.0^{+1.0}_{-1.0}$
$100\theta_{\text{MC}}$	1.04061	$1.0405^{+0.0010}_{-0.0010}$	$\Omega_m h^3$	0.09617	$0.09622^{+0.00095}_{-0.00093}$	$r_{\text{drag}}$	147.06	$147.0^{+1.1}_{-1.0}$
$\tau$	0.0854	$0.088^{+0.042}_{-0.041}$	$\sigma_8$	0.8346	$0.835^{+0.030}_{-0.030}$	$k_D$	0.14088	$0.1410^{+0.0011}_{-0.0012}$
$\alpha_{-1}$	-0.00081	$-0.0025^{+0.0035}_{-0.0047}$	$\sigma_8 \Omega_m^{0.5}$	0.4705	$0.472^{+0.027}_{-0.027}$	$100\theta_D$	0.16074	$0.16066^{+0.00063}_{-0.00060}$
$\ln(10^{10} A_s)$	3.108	$3.115^{+0.082}_{-0.080}$	$\sigma_8 \Omega_m^{0.25}$	0.6266	$0.628^{+0.027}_{-0.027}$	$z_{\text{eq}}$	3408	$3411^{+100}_{-100}$
$n_s$	0.9619	$0.960^{+0.015}_{-0.014}$	$\sigma_8/h^{0.5}$	1.0186	$1.020^{+0.039}_{-0.040}$	$k_{\text{eq}}$	0.010400	$0.01041^{+0.00031}_{-0.00031}$
$y_{\text{cal}}$	1.00029	$1.0004^{+0.0049}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.519	$2.526^{+0.095}_{-0.097}$	$100\theta_{\text{eq}}$	0.8120	$0.812^{+0.020}_{-0.019}$
$A_{217}^{\text{CIB}}$	66.1	$64^{+10}_{-10}$	$z_{\text{re}}$	10.63	$10.8^{+3.6}_{-3.7}$	$100\theta_{s,\text{eq}}$	0.4487	$0.448^{+0.010}_{-0.0097}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.05	—	$10^9 A_s$	2.237	$2.25^{+0.19}_{-0.18}$	$r_{\text{drag}}/D_V(0.57)$	0.07120	$0.0712^{+0.0016}_{-0.0015}$
$A_{143}^{\text{tSZ}}$	7.11	$5.1^{+3.7}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8860	$1.888^{+0.030}_{-0.029}$	$H(0.57)$	92.85	$92.86^{+0.88}_{-0.79}$
$A_{100}^{\text{PS}}$	252	$258^{+60}_{-60}$	$D_{40}$	1222.0	$1216^{+38}_{-37}$	$D_A(0.57)$	1393.6	$1394^{+26}_{-27}$
$A_{143}^{\text{PS}}$	39.0	$43^{+20}_{-20}$	$D_{220}$	5722	$5727^{+80}_{-80}$	$F_{\text{AP}}(0.57)$	0.6776	$0.6778^{+0.0071}_{-0.0070}$
$A_{143 \times 217}^{\text{PS}}$	34	$38^{+20}_{-20}$	$D_{810}$	2536.5	$2537^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4868	$0.487^{+0.019}_{-0.019}$
$A_{217}^{\text{PS}}$	98.4	$97^{+20}_{-20}$	$D_{1420}$	814.6	$814^{+10}_{-9.9}$	$\sigma_8(0.57)$	0.6193	$0.620^{+0.024}_{-0.023}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.53	$230.4^{+3.7}_{-3.7}$	$f_{2000}^{143}$	29.3	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.48	$7.5^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9619	$0.960^{+0.015}_{-0.014}$	$f_{2000}^{143 \times 217}$	31.98	$32^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.00	$9.0^{+3.6}_{-3.6}$	$Y_P$	0.245381	$0.24540^{+0.00022}_{-0.00022}$	$f_{2000}^{217}$	105.62	$105.8^{+4.0}_{-4.0}$
$A_{143 \times 217}^{\text{dustTT}}$	17.4	$17.1^{+8.2}_{-8.2}$	$Y_P^{\text{BBN}}$	0.246707	$0.24673^{+0.00022}_{-0.00022}$	$\chi_{\text{lowTEB}}^2$	10494.52	10495.0 ( $\nu$ : 3.3)
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$10^5 D/H$	2.596	$2.588^{+0.091}_{-0.092}$	$\chi_{\text{plik}}^2$	764.3	779.7 ( $\nu$ : 17.8)
$c_{100}$	0.99796	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.810	$13.809^{+0.076}_{-0.080}$	$\chi_{\text{prior}}^2$	1.9	7.3 ( $\nu$ : 6.3)
$c_{217}$	0.99583	$0.9959^{+0.0029}_{-0.0028}$	$z_*$	1089.98	$1089.93^{+0.85}_{-0.87}$	$\chi_{\text{CMB}}^2$	11258.8	11274.7 ( $\nu$ : 16.5)
$H_0$	67.14	$67.1^{+2.0}_{-1.9}$	$r_*$	144.39	$144.3^{+1.0}_{-1.0}$			
$\Omega_\Lambda$	0.6823	$0.681^{+0.027}_{-0.029}$	$100\theta_*$	1.04080	$1.0407^{+0.0010}_{-0.0010}$			

Best-fit  $\chi_{\text{eff}}^2 = 11260.72$ ;  $\bar{\chi}_{\text{eff}}^2 = 11282.01$ ;  $R - 1 = 0.00523$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10494.52 plik\_dx11dr2\_HM\_v18\_TT: 764.30

## 6.2 base\_alpha1\_plikHM\_TT\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022397	$0.02246^{+0.00045}_{-0.00046}$	$\Omega_m h^2$	0.14199	$0.1422^{+0.0024}_{-0.0024}$	$r_{\text{drag}}$	147.34	$147.23^{+0.76}_{-0.72}$
$\Omega_c h^2$	0.11895	$0.1191^{+0.0025}_{-0.0025}$	$\Omega_m h^3$	0.09615	$0.09623^{+0.00096}_{-0.00095}$	$k_D$	0.14063	$0.14079^{+0.00097}_{-0.0010}$
$100\theta_{\text{MC}}$	1.04082	$1.04069^{+0.00090}_{-0.00089}$	$\sigma_8$	0.8326	$0.835^{+0.030}_{-0.031}$	$100\theta_D$	0.16074	$0.16064^{+0.00064}_{-0.00060}$
$\tau$	0.0884	$0.093^{+0.039}_{-0.040}$	$\sigma_8 \Omega_m^{0.5}$	0.4634	$0.465^{+0.021}_{-0.021}$	$z_{\text{eq}}$	3378	$3383^{+58}_{-58}$
$\alpha_{-1}$	-0.00060	$-0.0023^{+0.0034}_{-0.0047}$	$\sigma_8 \Omega_m^{0.25}$	0.6211	$0.623^{+0.024}_{-0.024}$	$k_{\text{eq}}$	0.010309	$0.01033^{+0.00018}_{-0.00018}$
$\ln(10^{10} A_s)$	3.110	$3.121^{+0.079}_{-0.081}$	$\sigma_8/h^{0.5}$	1.0119	$1.015^{+0.037}_{-0.038}$	$100\theta_{\text{eq}}$	0.8177	$0.817^{+0.011}_{-0.011}$
$n_s$	0.9654	$0.963^{+0.011}_{-0.010}$	$\langle d^2 \rangle^{1/2}$	2.503	$2.515^{+0.091}_{-0.093}$	$100\theta_{s,\text{eq}}$	0.4516	$0.4511^{+0.0056}_{-0.0055}$
$y_{\text{cal}}$	1.00032	$1.0004^{+0.0049}_{-0.0047}$	$z_{\text{re}}$	10.85	$11.1^{+3.4}_{-3.5}$	$r_{\text{drag}}/D_V(0.57)$	0.07165	$0.07158^{+0.00085}_{-0.00083}$
$A_{217}^{\text{CIB}}$	66.3	$63^{+10}_{-10}$	$10^9 A_s$	2.243	$2.27^{+0.18}_{-0.18}$	$H(0.57)$	93.07	$93.07^{+0.57}_{-0.53}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.03	—	$10^9 A_s e^{-2\tau}$	1.8795	$1.882^{+0.024}_{-0.024}$	$D_A(0.57)$	1386.0	$1387^{+15}_{-16}$
$A_{143}^{\text{tSZ}}$	7.09	$5.2^{+3.7}_{-3.8}$	$D_{40}$	1219.1	$1213^{+38}_{-37}$	$F_{\text{AP}}(0.57)$	0.67557	$0.6758^{+0.0038}_{-0.0038}$
$A_{100}^{\text{PS}}$	252	$257^{+60}_{-50}$	$D_{220}$	5725	$5731^{+79}_{-80}$	$f\sigma_8(0.57)$	0.4836	$0.485^{+0.018}_{-0.018}$
$A_{143}^{\text{PS}}$	38.4	$42^{+20}_{-20}$	$D_{810}$	2534.9	$2536^{+27}_{-26}$	$\sigma_8(0.57)$	0.6199	$0.621^{+0.023}_{-0.023}$
$A_{143 \times 217}^{\text{PS}}$	33	$38^{+20}_{-20}$	$D_{1420}$	815.1	$814.8^{+9.8}_{-9.6}$	$f_{2000}^{143}$	29.2	$29^{+6}_{-6}$
$A_{217}^{\text{PS}}$	97.5	$97^{+20}_{-20}$	$D_{2000}$	230.77	$230.7^{+3.6}_{-3.5}$	$f_{2000}^{143 \times 217}$	31.81	$32^{+4}_{-4}$
$A^{\text{kSZ}}$	0.0	—	$n_{s,0.002}$	0.9654	$0.963^{+0.011}_{-0.010}$	$f_{2000}^{217}$	105.46	$105.5^{+4.0}_{-3.9}$
$A_{100}^{\text{dustTT}}$	7.40	$7.5^{+3.7}_{-3.7}$	$Y_{\text{P}}$	0.245405	$0.24543^{+0.00020}_{-0.00021}$	$\chi_{\text{lowTEB}}^2$	10494.69	10495.3 ( $\nu$ : 3.7)
$A_{143}^{\text{dustTT}}$	8.94	$9.0^{+3.7}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.246731	$0.24676^{+0.00020}_{-0.00021}$	$\chi_{\text{plik}}^2$	764.4	779.2 ( $\nu$ : 47.2)
$A_{143 \times 217}^{\text{dustTT}}$	17.4	$17.0^{+8.2}_{-8.3}$	$10^5 \text{D/H}$	2.586	$2.575^{+0.087}_{-0.083}$	$\chi_{6\text{DF}}^2$	0.022	0.073 ( $\nu$ : 0.0)
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	Age/Gyr	13.793	$13.792^{+0.058}_{-0.059}$	$\chi_{\text{MGS}}^2$	1.28	1.27 ( $\nu$ : 0.1)
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1089.79	$1089.74^{+0.65}_{-0.65}$	$\chi_{\text{DR11CMass}}^2$	2.47	3.00 ( $\nu$ : 0.3)
$c_{217}$	0.99588	$0.9958^{+0.0028}_{-0.0028}$	$r_*$	144.68	$144.59^{+0.68}_{-0.65}$	$\chi_{\text{DR11LOWZ}}^2$	0.61	0.85 ( $\nu$ : 0.2)
$H_0$	67.71	$67.7^{+1.2}_{-1.1}$	$100\theta_*$	1.04101	$1.04087^{+0.00091}_{-0.00089}$	$\chi_{\text{prior}}^2$	2.0	7.3 ( $\nu$ : 6.4)
$\Omega_\Lambda$	0.6903	$0.689^{+0.015}_{-0.015}$	$D_A/\text{Gpc}$	13.898	$13.892^{+0.064}_{-0.063}$	$\chi_{\text{CMB}}^2$	11259.1	11274.5 ( $\nu$ : 46.2)
$\Omega_m$	0.3097	$0.311^{+0.015}_{-0.015}$	$z_{\text{drag}}$	1059.93	$1060.1^{+1.0}_{-1.1}$	$\chi_{\text{BAO}}^2$	4.38	5.2 ( $\nu$ : 0.7)

Best-fit  $\chi_{\text{eff}}^2 = 11265.42$ ;  $\bar{\chi}_{\text{eff}}^2 = 11286.95$ ;  $R - 1 = 0.00775$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.02 MGS: 1.28 DR11CMass: 2.47 DR11LOWZ: 0.61 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.69 plik\_dx11dr2\_HM\_v18.TT: 764.38

### 6.3 base\_alpha1\_plikHM\_TT\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022369	$0.02243^{+0.00048}_{-0.00048}$	$\Omega_m$	0.3142	$0.315^{+0.026}_{-0.025}$	$D_A/\text{Gpc}$	13.883	$13.879^{+0.089}_{-0.088}$
$\Omega_c h^2$	0.11969	$0.1198^{+0.0042}_{-0.0041}$	$\Omega_m h^2$	0.14271	$0.1429^{+0.0040}_{-0.0040}$	$z_{\text{drag}}$	1059.89	$1060.0^{+1.0}_{-1.0}$
$100\theta_{\text{MC}}$	1.04072	$1.0406^{+0.0010}_{-0.0010}$	$\Omega_m h^3$	0.09617	$0.09623^{+0.00095}_{-0.00094}$	$r_{\text{drag}}$	147.17	$147.1^{+1.0}_{-0.99}$
$\tau$	0.0874	$0.091^{+0.041}_{-0.041}$	$\sigma_8$	0.8342	$0.835^{+0.030}_{-0.031}$	$k_D$	0.14078	$0.1409^{+0.0011}_{-0.0012}$
$\alpha_{-1}$	-0.00077	$-0.0024^{+0.0036}_{-0.0048}$	$\sigma_8 \Omega_m^{0.5}$	0.4676	$0.469^{+0.026}_{-0.026}$	$100\theta_D$	0.16074	$0.16064^{+0.00063}_{-0.00060}$
$\ln(10^{10} A_s)$	3.110	$3.118^{+0.081}_{-0.081}$	$\sigma_8 \Omega_m^{0.25}$	0.6246	$0.626^{+0.026}_{-0.027}$	$z_{\text{eq}}$	3395	$3399^{+95}_{-95}$
$n_s$	0.9633	$0.961^{+0.014}_{-0.014}$	$\sigma_8/h^{0.5}$	1.0162	$1.018^{+0.039}_{-0.040}$	$k_{\text{eq}}$	0.010362	$0.01037^{+0.00029}_{-0.00029}$
$y_{\text{cal}}$	1.00032	$1.0004^{+0.0049}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.514	$2.521^{+0.094}_{-0.096}$	$100\theta_{\text{eq}}$	0.8144	$0.814^{+0.018}_{-0.017}$
$A_{217}^{\text{CIB}}$	66.5	$64^{+10}_{-10}$	$z_{\text{re}}$	10.78	$11.0^{+3.5}_{-3.6}$	$100\theta_{s,\text{eq}}$	0.4500	$0.4497^{+0.0093}_{-0.0090}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.06	—	$10^9 A_s$	2.243	$2.26^{+0.19}_{-0.18}$	$r_{\text{drag}}/D_V(0.57)$	0.07140	$0.0714^{+0.0015}_{-0.0014}$
$A_{143}^{\text{tSZ}}$	7.15	$5.1^{+3.7}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8833	$1.886^{+0.029}_{-0.028}$	$H(0.57)$	92.95	$92.96^{+0.83}_{-0.76}$
$A_{100}^{\text{PS}}$	252	$257^{+60}_{-60}$	$D_{40}$	1220.2	$1215^{+38}_{-37}$	$D_A(0.57)$	1390.3	$1390^{+25}_{-25}$
$A_{143}^{\text{PS}}$	39.0	$43^{+20}_{-20}$	$D_{220}$	5723	$5729^{+80}_{-81}$	$F_{\text{AP}}(0.57)$	0.6767	$0.6769^{+0.0065}_{-0.0064}$
$A_{143 \times 217}^{\text{PS}}$	34	$38^{+20}_{-20}$	$D_{810}$	2535.8	$2536^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4857	$0.486^{+0.019}_{-0.019}$
$A_{217}^{\text{PS}}$	97.8	$97^{+20}_{-20}$	$D_{1420}$	814.8	$814.5^{+9.8}_{-9.9}$	$\sigma_8(0.57)$	0.6199	$0.621^{+0.024}_{-0.023}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.63	$230.6^{+3.7}_{-3.7}$	$f_{2000}^{143}$	29.3	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.42	$7.5^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9633	$0.961^{+0.014}_{-0.014}$	$f_{2000}^{143 \times 217}$	32.00	$32^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.05	$9.0^{+3.6}_{-3.6}$	$Y_P$	0.245392	$0.24542^{+0.00021}_{-0.00022}$	$f_{2000}^{217}$	105.62	$105.7^{+4.1}_{-4.0}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.0^{+8.2}_{-8.2}$	$Y_P^{\text{BBN}}$	0.246719	$0.24674^{+0.00021}_{-0.00022}$	$\chi_{\text{lowTEB}}^2$	10494.57	10495.1 ( $\nu$ : 3.5)
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	2.592	$2.581^{+0.091}_{-0.089}$	$\chi_{\text{plik}}^2$	764.2	780 ( $\nu$ : 78.6)
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.803	$13.801^{+0.073}_{-0.076}$	$\chi_{\text{JLA}}^2$	706.83	707.00 ( $\nu$ : 0.1)
$c_{217}$	0.99591	$0.9959^{+0.0028}_{-0.0028}$	$z_*$	1089.89	$1089.84^{+0.82}_{-0.82}$	$\chi_{\text{prior}}^2$	2.0	7.3 ( $\nu$ : 7.2)
$H_0$	67.39	$67.4^{+1.9}_{-1.8}$	$r_*$	144.51	$144.44^{+0.98}_{-0.97}$	$\chi_{\text{CMB}}^2$	11258.8	11270 ( $\nu$ : 78.5)
$\Omega_\Lambda$	0.6858	$0.685^{+0.025}_{-0.026}$	$100\theta_*$	1.04089	$1.0408^{+0.0010}_{-0.00099}$			

Best-fit  $\chi_{\text{eff}}^2 = 11967.60$ ;  $\bar{\chi}_{\text{eff}}^2 = 11989.25$ ;  $R - 1 = 0.00412$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.57 plik\_dx11dr2\_HM\_v18\_TT: 764.18 SN - JLA December\_2013: 706.83



## 6.4 base\_alpha1\_plikHM\_TT\_lowTEB\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022335	$0.02238^{+0.00050}_{-0.00049}$	$\Omega_m$	0.3090	$0.310^{+0.026}_{-0.027}$	$D_A/\text{Gpc}$	13.906	$13.901^{+0.085}_{-0.085}$
$\Omega_c h^2$	0.11880	$0.1189^{+0.0041}_{-0.0042}$	$\Omega_m h^2$	0.14178	$0.1419^{+0.0039}_{-0.0040}$	$z_{\text{drag}}$	1059.78	$1059.9^{+1.0}_{-1.0}$
$100\theta_{\text{MC}}$	1.04087	$1.0408^{+0.0010}_{-0.0010}$	$\Omega_m h^3$	0.09603	$0.09609^{+0.00093}_{-0.00092}$	$r_{\text{drag}}$	147.45	$147.37^{+0.92}_{-0.92}$
$\tau$	0.0694	$0.071^{+0.038}_{-0.033}$	$\sigma_8$	0.8166	$0.817^{+0.019}_{-0.019}$	$k_D$	0.14046	$0.1406^{+0.0010}_{-0.0011}$
$\alpha_{-1}$	-0.00039	$-0.0018^{+0.0030}_{-0.0043}$	$\sigma_8 \Omega_m^{0.5}$	0.4540	$0.454^{+0.017}_{-0.018}$	$100\theta_D$	0.16084	$0.16076^{+0.00063}_{-0.00058}$
$\ln(10^{10} A_s)$	3.071	$3.076^{+0.066}_{-0.061}$	$\sigma_8 \Omega_m^{0.25}$	0.6089	$0.609^{+0.015}_{-0.016}$	$z_{\text{eq}}$	3373	$3376^{+93}_{-96}$
$n_s$	0.9656	$0.963^{+0.014}_{-0.014}$	$\sigma_8/h^{0.5}$	0.9923	$0.992^{+0.022}_{-0.022}$	$k_{\text{eq}}$	0.010293	$0.01030^{+0.00028}_{-0.00029}$
$y_{\text{cal}}$	1.00009	$1.0001^{+0.0049}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.455	$2.460^{+0.053}_{-0.054}$	$100\theta_{\text{eq}}$	0.8185	$0.818^{+0.019}_{-0.017}$
$A_{217}^{\text{CIB}}$	67.4	$64^{+10}_{-10}$	$z_{\text{re}}$	9.14	$9.2^{+3.1}_{-3.2}$	$100\theta_{s,\text{eq}}$	0.4521	$0.4518^{+0.0097}_{-0.0090}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.156	$2.17^{+0.15}_{-0.13}$	$r_{\text{drag}}/D_V(0.57)$	0.07170	$0.0717^{+0.0014}_{-0.0014}$
$A_{143}^{\text{tSZ}}$	7.19	$5.0^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8769	$1.879^{+0.027}_{-0.027}$	$H(0.57)$	93.05	$93.07^{+0.88}_{-0.80}$
$A_{100}^{\text{PS}}$	254	$261^{+50}_{-50}$	$D_{40}$	1213.5	$1207^{+41}_{-37}$	$D_A(0.57)$	1386.0	$1386^{+25}_{-26}$
$A_{143}^{\text{PS}}$	39.2	$44^{+20}_{-20}$	$D_{220}$	5719	$5724^{+81}_{-79}$	$F_{\text{AP}}(0.57)$	0.6754	$0.6756^{+0.0065}_{-0.0064}$
$A_{143 \times 217}^{\text{PS}}$	33	$38^{+20}_{-20}$	$D_{810}$	2533.7	$2534^{+26}_{-26}$	$f\sigma_8(0.57)$	0.4742	$0.474^{+0.011}_{-0.011}$
$A_{217}^{\text{PS}}$	97.0	$96^{+20}_{-20}$	$D_{1420}$	814.8	$814.2^{+9.8}_{-10}$	$\sigma_8(0.57)$	0.6081	$0.608^{+0.018}_{-0.017}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.16	$229.9^{+3.6}_{-3.7}$	$f_{2000}^{143}$	30.0	$31^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.40	$7.5^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9656	$0.963^{+0.014}_{-0.014}$	$f_{2000}^{143 \times 217}$	32.55	$33^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.10	$9.1^{+3.8}_{-3.7}$	$Y_P$	0.245377	$0.24540^{+0.00022}_{-0.00023}$	$f_{2000}^{217}$	106.08	$106.2^{+4.0}_{-4.1}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.3}_{-8.8}$	$Y_P^{\text{BBN}}$	0.246704	$0.24672^{+0.00022}_{-0.00023}$	$\chi^2_{\text{lensing}}$	9.43	10.2 ( $\nu$ : 1.6)
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$10^5 D/H$	2.598	$2.589^{+0.095}_{-0.092}$	$\chi^2_{\text{lowTEB}}$	10493.35	10493.7 ( $\nu$ : 2.0)
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.797	$13.795^{+0.075}_{-0.079}$	$\chi^2_{\text{plik}}$	766.9	782.1 ( $\nu$ : 18.3)
$c_{217}$	0.99596	$0.9959^{+0.0028}_{-0.0027}$	$z_*$	1089.86	$1089.81^{+0.83}_{-0.88}$	$\chi^2_{\text{prior}}$	2.1	7.4 ( $\nu$ : 6.8)
$H_0$	67.73	$67.7^{+1.9}_{-1.8}$	$r_*$	144.77	$144.71^{+0.94}_{-0.94}$	$\chi^2_{\text{CMB}}$	11269.7	11286.0 ( $\nu$ : 17.9)
$\Omega_\Lambda$	0.6910	$0.690^{+0.027}_{-0.026}$	$100\theta_*$	1.04106	$1.0410^{+0.0010}_{-0.0010}$			

Best-fit  $\chi^2_{\text{eff}} = 11271.77$ ;  $\bar{\chi}^2_{\text{eff}} = 11293.45$ ;  $R - 1 = 0.01968$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.43 lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10493.35 plik\_dx11dr2\_HM\_v18.TT: 766.92

## 6.5 base\_alpha1\_plikHM\_TT\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022385	$0.02243^{+0.00049}_{-0.00048}$	$\Omega_m$	0.3131	$0.315^{+0.027}_{-0.026}$	$D_A/\text{Gpc}$	13.886	$13.879^{+0.091}_{-0.091}$
$\Omega_c h^2$	0.11952	$0.1197^{+0.0043}_{-0.0043}$	$\Omega_m h^2$	0.14255	$0.1428^{+0.0041}_{-0.0041}$	$z_{\text{drag}}$	1059.93	$1060.1^{+1.0}_{-1.0}$
$100\theta_{\text{MC}}$	1.04074	$1.0406^{+0.0010}_{-0.0010}$	$\Omega_m h^3$	0.09618	$0.09624^{+0.00096}_{-0.00094}$	$r_{\text{drag}}$	147.20	$147.1^{+1.0}_{-1.0}$
$\tau$	0.0879	$0.091^{+0.042}_{-0.041}$	$\sigma_8$	0.8340	$0.835^{+0.030}_{-0.030}$	$k_D$	0.14076	$0.1409^{+0.0011}_{-0.0012}$
$\alpha_{-1}$	-0.00076	$-0.0024^{+0.0035}_{-0.0048}$	$\sigma_8 \Omega_m^{0.5}$	0.4667	$0.469^{+0.026}_{-0.027}$	$100\theta_D$	0.16073	$0.16063^{+0.00063}_{-0.00060}$
$\ln(10^{10} A_s)$	3.111	$3.119^{+0.081}_{-0.081}$	$\sigma_8 \Omega_m^{0.25}$	0.6239	$0.626^{+0.026}_{-0.027}$	$z_{\text{eq}}$	3391	$3398^{+99}_{-98}$
$n_s$	0.9637	$0.961^{+0.014}_{-0.014}$	$\sigma_8/h^{0.5}$	1.0153	$1.018^{+0.039}_{-0.040}$	$k_{\text{eq}}$	0.010350	$0.01037^{+0.00030}_{-0.00030}$
$y_{\text{cal}}$	1.00027	$1.0004^{+0.0049}_{-0.0047}$	$\langle d^2 \rangle^{1/2}$	2.512	$2.521^{+0.094}_{-0.095}$	$100\theta_{\text{eq}}$	0.8152	$0.814^{+0.019}_{-0.018}$
$A_{217}^{\text{CIB}}$	66.9	$64^{+10}_{-10}$	$z_{\text{re}}$	10.82	$11.0^{+3.5}_{-3.7}$	$100\theta_{s,\text{eq}}$	0.4504	$0.4498^{+0.0097}_{-0.0093}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.09	—	$10^9 A_s$	2.244	$2.26^{+0.19}_{-0.18}$	$r_{\text{drag}}/D_V(0.57)$	0.07146	$0.0714^{+0.0015}_{-0.0014}$
$A_{143}^{\text{tSZ}}$	7.16	$5.2^{+3.7}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8825	$1.885^{+0.029}_{-0.028}$	$H(0.57)$	92.98	$92.98^{+0.86}_{-0.78}$
$A_{100}^{\text{PS}}$	251	$257^{+60}_{-50}$	$D_{40}$	1220.0	$1215^{+38}_{-37}$	$D_A(0.57)$	1389.1	$1390^{+25}_{-26}$
$A_{143}^{\text{PS}}$	39.1	$43^{+20}_{-20}$	$D_{220}$	5725	$5729^{+80}_{-80}$	$F_{\text{AP}}(0.57)$	0.6764	$0.6768^{+0.0067}_{-0.0067}$
$A_{143 \times 217}^{\text{PS}}$	34	$38^{+20}_{-20}$	$D_{810}$	2535.7	$2536^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4853	$0.486^{+0.019}_{-0.019}$
$A_{217}^{\text{PS}}$	97.0	$97^{+20}_{-20}$	$D_{1420}$	814.9	$814.6^{+9.9}_{-9.8}$	$\sigma_8(0.57)$	0.6200	$0.621^{+0.024}_{-0.023}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.68	$230.6^{+3.7}_{-3.7}$	$f_{2000}^{143}$	29.2	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.47	$7.5^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9637	$0.961^{+0.014}_{-0.014}$	$f_{2000}^{143 \times 217}$	31.90	$32^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.07	$9.0^{+3.7}_{-3.6}$	$Y_P$	0.245399	$0.24542^{+0.00022}_{-0.00022}$	$f_{2000}^{217}$	105.45	$105.6^{+4.1}_{-4.0}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.0^{+8.2}_{-8.2}$	$Y_P^{\text{BBN}}$	0.246726	$0.24675^{+0.00022}_{-0.00022}$	$\chi_{\text{lowTEB}}^2$	10494.61	10495.2 ( $\nu$ : 3.6)
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$10^5 D/H$	2.589	$2.580^{+0.091}_{-0.090}$	$\chi_{\text{plik}}^2$	764.2	779.6 ( $\nu$ : 35.6)
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.799	$13.799^{+0.074}_{-0.077}$	$\chi_{\text{H070p6}}^2$	0.88	1.00 ( $\nu$ : 0.2)
$c_{217}$	0.99590	$0.9959^{+0.0028}_{-0.0028}$	$z_*$	1089.86	$1089.82^{+0.83}_{-0.85}$	$\chi_{\text{prior}}^2$	2.0	7.3 ( $\nu$ : 6.3)
$H_0$	67.47	$67.4^{+1.9}_{-1.9}$	$r_*$	144.54	$144.5^{+1.0}_{-1.0}$	$\chi_{\text{CMB}}^2$	11258.8	11274.8 ( $\nu$ : 34.5)
$\Omega_\Lambda$	0.6869	$0.685^{+0.026}_{-0.027}$	$100\theta_*$	1.04092	$1.0408^{+0.0010}_{-0.0010}$			

Best-fit  $\chi_{\text{eff}}^2 = 11261.72$ ;  $\bar{\chi}_{\text{eff}}^2 = 11283.07$ ;  $R - 1 = 0.00545$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.61 plik\_dx11dr2\_HM\_v18\_TT: 764.18 Hubble - H070p6: 0.88

## 6.6 base\_alpha1\_plikHM\_TT\_lowTEB\_post\_lensing\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022360	$0.02242^{+0.00043}_{-0.00046}$	$\Omega_m h^3$	0.09603	$0.09610^{+0.00090}_{-0.00092}$	$100\theta_D$	0.16083	$0.16073^{+0.00064}_{-0.00056}$
$\Omega_c h^2$	0.11837	$0.1184^{+0.0024}_{-0.0024}$	$\sigma_8$	0.8171	$0.817^{+0.019}_{-0.018}$	$z_{eq}$	3363	$3366^{+55}_{-55}$
$100\theta_{MC}$	1.04095	$1.04083^{+0.00092}_{-0.00087}$	$\sigma_8 \Omega_m^{0.5}$	0.4523	$0.453^{+0.013}_{-0.013}$	$k_{eq}$	0.010264	$0.01027^{+0.00017}_{-0.00017}$
$\tau$	0.0718	$0.074^{+0.029}_{-0.028}$	$\sigma_8 \Omega_m^{0.25}$	0.6079	$0.608^{+0.014}_{-0.014}$	$100\theta_{eq}$	0.8204	$0.820^{+0.011}_{-0.010}$
$\alpha_{-1}$	-0.00043	$-0.0017^{+0.0031}_{-0.0044}$	$\sigma_8/h^{0.5}$	0.9914	$0.992^{+0.022}_{-0.022}$	$100\theta_{s,eq}$	0.4531	$0.4528^{+0.0054}_{-0.0052}$
$\ln(10^{10} A_s)$	3.075	$3.081^{+0.054}_{-0.055}$	$\langle d^2 \rangle^{1/2}$	2.454	$2.458^{+0.053}_{-0.053}$	$r_{drag}/D_V(0.57)$	0.07186	$0.07182^{+0.00083}_{-0.00079}$
$n_s$	0.9664	$0.964^{+0.011}_{-0.010}$	$z_{re}$	9.36	$9.5^{+2.4}_{-2.7}$	$H(0.57)$	93.13	$93.15^{+0.55}_{-0.52}$
$y_{cal}$	1.0002	$1.0001^{+0.0051}_{-0.0049}$	$10^9 A_s$	2.166	$2.18^{+0.12}_{-0.12}$	$D_A(0.57)$	1383.4	$1383^{+15}_{-15}$
$A_{217}^{CIB}$	67.6	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8760	$1.877^{+0.024}_{-0.023}$	$F_{AP}(0.57)$	0.67473	$0.6748^{+0.0036}_{-0.0037}$
$\xi^{tSZ \times CIB}$	0.00	—	$D_{40}$	1212.5	$1206^{+40}_{-37}$	$f\sigma_8(0.57)$	0.4737	$0.474^{+0.011}_{-0.010}$
$A_{143}^{tSZ}$	7.22	$5.0^{+3.8}_{-3.8}$	$D_{220}$	5723	$5726^{+79}_{-80}$	$\sigma_8(0.57)$	0.6091	$0.609^{+0.015}_{-0.014}$
$A_{100}^{PS}$	254	$261^{+50}_{-50}$	$D_{810}$	2534.1	$2533^{+27}_{-27}$	$f_{2000}^{143}$	29.9	$30^{+6}_{-6}$
$A_{143}^{PS}$	39.0	$43^{+20}_{-20}$	$D_{1420}$	815.1	$814.4^{+9.7}_{-9.9}$	$f_{2000}^{143 \times 217}$	32.44	$33^{+4}_{-4}$
$A_{143 \times 217}^{PS}$	32	$38^{+20}_{-20}$	$D_{2000}$	230.31	$230.1^{+3.4}_{-3.4}$	$f_{2000}^{217}$	106.03	$106.1^{+4.0}_{-4.0}$
$A_{217}^{PS}$	96.7	$96^{+20}_{-20}$	$n_{s,0.002}$	0.9664	$0.964^{+0.011}_{-0.010}$	$\chi^2_{lensing}$	9.27	$10.0 (\nu: 1.4)$
$A^{kSZ}$	0.0	—	$Y_P$	0.245388	$0.24541^{+0.00019}_{-0.00021}$	$\chi^2_{lowTEB}$	10493.30	$10493.6 (\nu: 1.8)$
$A_{100}^{dustTT}$	7.49	$7.5^{+3.8}_{-3.8}$	$Y_P^{BBN}$	0.246715	$0.24674^{+0.00019}_{-0.00021}$	$\chi^2_{plik}$	767.2	$783 (\nu: 242.8)$
$A_{143}^{dustTT}$	9.07	$9.1^{+3.7}_{-3.7}$	$10^5 D/H$	2.593	$2.582^{+0.087}_{-0.080}$	$\chi^2_{H070p6}$	0.65	$0.68 (\nu: 0.0)$
$A_{143 \times 217}^{dustTT}$	17.8	$17.2^{+8.7}_{-8.3}$	Age/Gyr	13.791	$13.788^{+0.057}_{-0.058}$	$\chi^2_{JLA}$	706.621	$706.67 (\nu: 0.0)$
$A_{217}^{dustTT}$	82.0	$82^{+10}_{-10}$	$z_*$	1089.79	$1089.72^{+0.66}_{-0.63}$	$\chi^2_{6DF}$	0.003	$0.042 (\nu: 0.0)$
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.86	$144.80^{+0.63}_{-0.62}$	$\chi^2_{MGS}$	1.54	$1.57 (\nu: 0.2)$
$c_{217}$	0.99602	$0.9960^{+0.0029}_{-0.0027}$	$100\theta_*$	1.04113	$1.04101^{+0.00092}_{-0.00086}$	$\chi^2_{DR11CMass}$	2.42	$2.84 (\nu: 0.2)$
$H_0$	67.93	$67.9^{+1.1}_{-1.1}$	$D_A/\text{Gpc}$	13.914	$13.910^{+0.060}_{-0.060}$	$\chi^2_{DR11LOWZ}$	0.37	$0.53 (\nu: 0.1)$
$\Omega_\Lambda$	0.6936	$0.693^{+0.014}_{-0.014}$	$z_{drag}$	1059.78	$1059.93^{+0.96}_{-1.0}$	$\chi^2_{prior}$	2.1	$7.5 (\nu: 7.6)$
$\Omega_m$	0.3064	$0.307^{+0.014}_{-0.014}$	$r_{drag}$	147.54	$147.46^{+0.71}_{-0.68}$	$\chi^2_{CMB}$	11269.7	$11290 (\nu: 246.9)$
$\Omega_m h^2$	0.14137	$0.1415^{+0.0023}_{-0.0023}$	$k_D$	0.14039	$0.14052^{+0.00092}_{-0.00097}$	$\chi^2_{BAO}$	4.34	$4.98 (\nu: 0.4)$

Best-fit  $\chi^2_{eff} = 11983.43$ ;  $\bar{\chi}^2_{eff} = 12006.07$ ;  $R - 1 = 0.02161$

$\chi^2_{eff}$ : BAO - 6DF: 0.00 MGS: 1.54 DR11CMass: 2.42 DR11LOWZ: 0.37 CMB - smica\_g30\_ftl\_full\_pp: 9.27 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.30 plik\_dx11dr2\_HM\_v18\_TT: 767.16 Hubble - H070p6: 0.65 SN - JLA December\_2013: 706.62

## 6.7 base\_alpha1\_plikHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00049}_{-0.00047}$	$\Omega_m$	$0.319^{+0.029}_{-0.027}$	$D_A/\text{Gpc}$	$13.868^{+0.094}_{-0.093}$
$\Omega_c h^2$	$0.1203^{+0.0045}_{-0.0045}$	$\Omega_m h^2$	$0.1434^{+0.0043}_{-0.0042}$	$z_{\text{drag}}$	$1060.0^{+1.1}_{-0.99}$
$100\theta_{\text{MC}}$	$1.0405^{+0.0010}_{-0.0010}$	$\Omega_m h^3$	$0.09623^{+0.00095}_{-0.00093}$	$r_{\text{drag}}$	$147.0^{+1.1}_{-1.0}$
$\tau$	$0.089^{+0.040}_{-0.041}$	$\sigma_8$	$0.836^{+0.030}_{-0.028}$	$k_D$	$0.1410^{+0.0011}_{-0.0012}$
$\alpha_{-1}$	$-0.0025^{+0.0035}_{-0.0047}$	$\sigma_8 \Omega_m^{0.5}$	$0.472^{+0.028}_{-0.027}$	$100\theta_D$	$0.16066^{+0.00061}_{-0.00060}$
$\ln(10^{10} A_s)$	$3.116^{+0.078}_{-0.079}$	$\sigma_8 \Omega_m^{0.25}$	$0.628^{+0.027}_{-0.026}$	$z_{\text{eq}}$	$3411^{+100}_{-100}$
$n_s$	$0.960^{+0.015}_{-0.014}$	$\sigma_8/h^{0.5}$	$1.020^{+0.039}_{-0.039}$	$k_{\text{eq}}$	$0.01041^{+0.00031}_{-0.00031}$
$y_{\text{cal}}$	$1.0004^{+0.0049}_{-0.0047}$	$\langle d^2 \rangle^{1/2}$	$2.527^{+0.094}_{-0.093}$	$100\theta_{\text{eq}}$	$0.812^{+0.019}_{-0.019}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$z_{\text{re}}$	$10.9^{+3.2}_{-3.4}$	$100\theta_{\text{s,eq}}$	$0.448^{+0.010}_{-0.0097}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s$	$2.26^{+0.18}_{-0.18}$	$r_{\text{drag}}/D_V(0.57)$	$0.0712^{+0.0015}_{-0.0015}$
$A_{143}^{\text{tSZ}}$	$5.1^{+3.7}_{-3.8}$	$10^9 A_s e^{-2\tau}$	$1.888^{+0.030}_{-0.029}$	$H(0.57)$	$92.86^{+0.87}_{-0.79}$
$A_{100}^{\text{PS}}$	$258^{+60}_{-50}$	$D_{40}$	$1216^{+38}_{-37}$	$D_A(0.57)$	$1394^{+26}_{-27}$
$A_{143}^{\text{PS}}$	$43^{+20}_{-20}$	$D_{220}$	$5727^{+80}_{-81}$	$F_{\text{AP}}(0.57)$	$0.6778^{+0.0071}_{-0.0069}$
$A_{143 \times 217}^{\text{PS}}$	$38^{+20}_{-20}$	$D_{810}$	$2537^{+27}_{-27}$	$f\sigma_8(0.57)$	$0.488^{+0.019}_{-0.019}$
$A_{217}^{\text{PS}}$	$97^{+20}_{-20}$	$D_{1420}$	$814.1^{+9.9}_{-9.9}$	$\sigma_8(0.57)$	$0.620^{+0.023}_{-0.023}$
$A^{\text{kSZ}}$	—	$D_{2000}$	$230.4^{+3.7}_{-3.6}$	$f_{2000}^{143}$	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	$7.5^{+3.7}_{-3.7}$	$n_{\text{s},0.002}$	$0.960^{+0.015}_{-0.014}$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	$9.0^{+3.7}_{-3.6}$	$Y_{\text{P}}$	$0.24540^{+0.00022}_{-0.00022}$	$f_{2000}^{217}$	$105.8^{+4.1}_{-4.0}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.0^{+8.2}_{-8.2}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24673^{+0.00022}_{-0.00022}$	$\chi^2_{\text{lowTEB}}$	$10495.0 (\nu: 3.3)$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	$2.587^{+0.091}_{-0.091}$	$\chi^2_{\text{plik}}$	$779.7 (\nu: 32.4)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$\text{Age}/\text{Gyr}$	$13.808^{+0.076}_{-0.079}$	$\chi^2_{\text{prior}}$	$7.2 (\nu: 6.3)$
$c_{217}$	$0.9959^{+0.0028}_{-0.0028}$	$z_*$	$1089.92^{+0.85}_{-0.86}$	$\chi^2_{\text{CMB}}$	$11274.7 (\nu: 31.1)$
$H_0$	$67.1^{+2.0}_{-1.9}$	$r_*$	$144.3^{+1.0}_{-1.0}$		
$\Omega_\Lambda$	$0.681^{+0.027}_{-0.029}$	$100\theta_*$	$1.0407^{+0.0010}_{-0.0010}$		

$$\bar{\chi}^2_{\text{eff}} = 11281.96; R - 1 = 0.00567$$

## 6.8 base\_alpha1\_plikHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022269	$0.02225^{+0.00031}_{-0.00030}$	$A_{100 \times 217}^{\text{dustTE}}$	0.304	$0.30^{+0.17}_{-0.16}$	Age/Gyr	13.806	$13.805^{+0.056}_{-0.057}$
$\Omega_c h^2$	0.11941	$0.1192^{+0.0037}_{-0.0035}$	$A_{143}^{\text{dustTE}}$	0.154	$0.15^{+0.11}_{-0.11}$	$z_*$	1090.00	$1090.01^{+0.59}_{-0.59}$
$100\theta_{\text{MC}}$	1.04090	$1.04096^{+0.00086}_{-0.00095}$	$A_{143 \times 217}^{\text{dustTE}}$	0.334	$0.34^{+0.16}_{-0.16}$	$r_*$	144.66	$144.74^{+0.83}_{-0.90}$
$\tau$	0.0819	$0.080^{+0.034}_{-0.034}$	$A_{217}^{\text{dustTE}}$	1.665	$1.67^{+0.50}_{-0.49}$	$100\theta_*$	1.04109	$1.04115^{+0.00086}_{-0.00095}$
$\alpha_{-1}$	0.00004	$0.0003^{+0.0016}_{-0.0012}$	$c_{100}$	0.99818	$0.9981^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.895	$13.901^{+0.074}_{-0.079}$
$\ln(10^{10} A_s)$	3.098	$3.092^{+0.065}_{-0.066}$	$c_{217}$	0.99595	$0.9960^{+0.0029}_{-0.0029}$	$z_{\text{drag}}$	1059.67	$1059.59^{+0.69}_{-0.64}$
$n_s$	0.9667	$0.967^{+0.013}_{-0.014}$	$H_0$	67.47	$67.6^{+1.6}_{-1.6}$	$r_{\text{drag}}$	147.36	$147.44^{+0.83}_{-0.91}$
$y_{\text{cal}}$	1.00029	$1.0005^{+0.0050}_{-0.0049}$	$\Omega_\Lambda$	0.6873	$0.688^{+0.021}_{-0.023}$	$k_D$	0.14051	$0.14040^{+0.00097}_{-0.00088}$
$A_{217}^{\text{CIB}}$	65.3	$64^{+10}_{-10}$	$\Omega_m$	0.3127	$0.312^{+0.023}_{-0.021}$	$100\theta_D$	0.160912	$0.16096^{+0.00041}_{-0.00043}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.23	—	$\Omega_m h^2$	0.14233	$0.1421^{+0.0036}_{-0.0034}$	$z_{\text{eq}}$	3386	$3380^{+86}_{-81}$
$A_{143}^{\text{tSZ}}$	7.04	$5.4^{+3.5}_{-3.8}$	$\Omega_m h^3$	0.09603	$0.09597^{+0.00061}_{-0.00059}$	$k_{\text{eq}}$	0.010334	$0.01032^{+0.00026}_{-0.00025}$
$A_{100}^{\text{PS}}$	254	$259^{+50}_{-50}$	$\sigma_8$	0.8325	$0.830^{+0.026}_{-0.026}$	$100\theta_{\text{eq}}$	0.8159	$0.817^{+0.016}_{-0.016}$
$A_{143}^{\text{PS}}$	41.6	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4655	$0.463^{+0.023}_{-0.022}$	$100\theta_{s,\text{eq}}$	0.4508	$0.4514^{+0.0080}_{-0.0084}$
$A_{143 \times 217}^{\text{PS}}$	39.3	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6226	$0.620^{+0.023}_{-0.022}$	$r_{\text{drag}}/D_V(0.57)$	0.07151	$0.0716^{+0.0012}_{-0.0013}$
$A_{217}^{\text{PS}}$	100.1	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0136	$1.010^{+0.034}_{-0.034}$	$H(0.57)$	92.95	$92.97^{+0.67}_{-0.64}$
$A^{\text{kSZ}}$	0.00	$< 7.69$	$\langle d^2 \rangle^{1/2}$	2.505	$2.498^{+0.084}_{-0.083}$	$D_A(0.57)$	1389.5	$1389^{+22}_{-21}$
$A_{100}^{\text{dustTT}}$	7.35	$7.4^{+3.7}_{-3.7}$	$z_{\text{re}}$	10.32	$10.1^{+3.1}_{-3.1}$	$F_{\text{AP}}(0.57)$	0.6763	$0.6760^{+0.0059}_{-0.0054}$
$A_{143}^{\text{dustTT}}$	8.94	$8.9^{+3.6}_{-3.6}$	$10^9 A_s$	2.214	$2.20^{+0.15}_{-0.14}$	$f\sigma_8(0.57)$	0.4844	$0.483^{+0.016}_{-0.016}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.0^{+8.1}_{-8.1}$	$10^9 A_s e^{-2\tau}$	1.8800	$1.878^{+0.028}_{-0.027}$	$\sigma_8(0.57)$	0.6191	$0.618^{+0.020}_{-0.020}$
$A_{217}^{\text{dustTT}}$	82.3	$82^{+10}_{-10}$	$D_{40}$	1242.7	$1245^{+29}_{-29}$	$f_{2000}^{143}$	28.9	$29^{+5}_{-5}$
$A_{100}^{\text{dustEE}}$	0.0812	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5727	$5726^{+79}_{-75}$	$f_{2000}^{143 \times 217}$	31.93	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0486	$0.0485^{+0.0099}_{-0.0098}$	$D_{810}$	2535.5	$2535^{+27}_{-27}$	$f_{2000}^{217}$	105.52	$105.7^{+3.7}_{-3.7}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.0999^{+0.064}_{-0.064}$	$D_{1420}$	815.4	$815.2^{+9.5}_{-9.3}$	$\chi_{\text{lowTEB}}^2$	10497.8	$10498.9 (\nu: 4.6)$
$A_{143}^{\text{dustEE}}$	0.0998	$0.0998^{+0.014}_{-0.014}$	$D_{2000}$	230.75	$230.6^{+3.2}_{-3.2}$	$\chi_{\text{plik}}^2$	2430.9	$2451.1 (\nu: 26.8)$
$A_{143 \times 217}^{\text{dustEE}}$	0.226	$0.224^{+0.091}_{-0.091}$	$n_{s,0.002}$	0.9667	$0.967^{+0.013}_{-0.014}$	$\chi_{\text{prior}}^2$	6.7	$19.2 (\nu: 14.9)$
$A_{217}^{\text{dustEE}}$	0.652	$0.65^{+0.25}_{-0.25}$	$Y_P$	0.245348	$0.24534^{+0.00014}_{-0.00014}$	$\chi_{\text{CMB}}^2$	12928.6	$12950.0 (\nu: 24.2)$
$A_{100}^{\text{dustTE}}$	0.140	$0.141^{+0.074}_{-0.074}$	$Y_P^{\text{BBN}}$	0.246675	$0.24666^{+0.00014}_{-0.00014}$			
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.057}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.610	$2.615^{+0.057}_{-0.059}$			

Best-fit  $\chi_{\text{eff}}^2 = 12935.39$ ;  $\bar{\chi}_{\text{eff}}^2 = 12969.25$ ;  $R - 1 = 0.00701$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10497.79 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2430.86

## 6.9 base\_alpha1\_plikHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022273	$0.02225^{+0.00030}_{-0.00028}$	$A_{143}^{\text{dust}TE}$	0.154	$0.15^{+0.11}_{-0.10}$	$r_*$	144.77	$144.82^{+0.57}_{-0.58}$
$\Omega_c h^2$	0.11897	$0.1188^{+0.0023}_{-0.0022}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04115	$1.04124^{+0.00072}_{-0.00078}$
$100\theta_{MC}$	1.04096	$1.04104^{+0.00072}_{-0.00077}$	$A_{217}^{\text{dust}TE}$	1.673	$1.67^{+0.49}_{-0.49}$	$D_A/\text{Gpc}$	13.905	$13.909^{+0.052}_{-0.052}$
$\tau$	0.0805	$0.081^{+0.033}_{-0.033}$	$c_{100}$	0.99816	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.63	$1059.58^{+0.68}_{-0.67}$
$\alpha_{-1}$	0.00007	$0.00039^{+0.0014}_{-0.00094}$	$c_{217}$	0.99596	$0.9960^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.47	$147.53^{+0.60}_{-0.63}$
$\ln(10^{10} A_s)$	3.093	$3.093^{+0.065}_{-0.066}$	$H_0$	67.65	$67.7^{+1.0}_{-1.0}$	$k_D$	0.14039	$0.14031^{+0.00077}_{-0.00071}$
$n_s$	0.9680	$0.9688^{+0.0097}_{-0.010}$	$\Omega_\Lambda$	0.6900	$0.691^{+0.013}_{-0.014}$	$100\theta_D$	0.160932	$0.16098^{+0.00040}_{-0.00044}$
$y_{\text{cal}}$	1.00033	$1.0005^{+0.0048}_{-0.0049}$	$\Omega_m$	0.3100	$0.309^{+0.014}_{-0.013}$	$z_{\text{eq}}$	3375	$3372^{+53}_{-52}$
$A_{217}^{\text{CIB}}$	66.2	$64^{+10}_{-10}$	$\Omega_m h^2$	0.14189	$0.1417^{+0.0022}_{-0.0022}$	$k_{\text{eq}}$	0.010301	$0.01029^{+0.00016}_{-0.00016}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.13	—	$\Omega_m h^3$	0.09598	$0.09596^{+0.00061}_{-0.00059}$	$100\theta_{\text{eq}}$	0.8179	$0.8186^{+0.0099}_{-0.0099}$
$A_{143}^{\text{tSZ}}$	7.20	$5.4^{+3.5}_{-3.7}$	$\sigma_8$	0.8299	$0.830^{+0.026}_{-0.026}$	$100\theta_{s,\text{eq}}$	0.4519	$0.4522^{+0.0052}_{-0.0052}$
$A_{100}^{\text{PS}}$	255	$259^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4621	$0.462^{+0.018}_{-0.018}$	$r_{\text{drag}}/D_V(0.57)$	0.07166	$0.07172^{+0.00079}_{-0.00079}$
$A_{143}^{\text{PS}}$	39.8	$43^{+10}_{-10}$	$\sigma_8 \Omega_m^{0.25}$	0.6193	$0.619^{+0.021}_{-0.021}$	$H(0.57)$	93.008	$93.03^{+0.45}_{-0.43}$
$A_{143 \times 217}^{\text{PS}}$	36.2	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0090	$1.009^{+0.032}_{-0.032}$	$D_A(0.57)$	1387.2	$1386^{+13}_{-13}$
$A_{217}^{\text{PS}}$	98.7	$98^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.494	$2.494^{+0.079}_{-0.079}$	$F_{\text{AP}}(0.57)$	0.67566	$0.6755^{+0.0035}_{-0.0035}$
$A^{\text{kSZ}}$	0.00	$< 7.61$	$z_{\text{re}}$	10.19	$10.1^{+3.0}_{-3.0}$	$f\sigma_8(0.57)$	0.4821	$0.482^{+0.015}_{-0.016}$
$A_{100}^{\text{dust}TT}$	7.45	$7.4^{+3.6}_{-3.7}$	$10^9 A_s$	2.205	$2.21^{+0.15}_{-0.14}$	$\sigma_8(0.57)$	0.6177	$0.618^{+0.020}_{-0.020}$
$A_{143}^{\text{dust}TT}$	9.00	$8.9^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8770	$1.876^{+0.023}_{-0.023}$	$f_{2000}^{143}$	29.1	$29^{+5}_{-5}$
$A_{143 \times 217}^{\text{dust}TT}$	17.7	$17.0^{+8.2}_{-8.1}$	$D_{40}$	1240.9	$1246^{+28}_{-30}$	$f_{2000}^{143 \times 217}$	32.03	$32^{+4}_{-4}$
$A_{217}^{\text{dust}TT}$	82.1	$82^{+10}_{-10}$	$D_{220}$	5725	$5726^{+77}_{-76}$	$f_{2000}^{217}$	105.67	$105.7^{+3.6}_{-3.7}$
$A_{100}^{\text{dust}EE}$	0.0811	$0.081^{+0.011}_{-0.011}$	$D_{810}$	2534.2	$2534^{+27}_{-26}$	$\chi_{\text{lowTEB}}^2$	10497.6	$10499.2 (\nu: 4.3)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0488	$0.0484^{+0.0099}_{-0.0097}$	$D_{1420}$	815.3	$815.4^{+9.1}_{-9.1}$	$\chi_{\text{plik}}^2$	2431.0	$2450.3 (\nu: 25.2)$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.100^{+0.064}_{-0.062}$	$D_{2000}$	230.69	$230.7^{+3.1}_{-3.1}$	$\chi_{6\text{DF}}^2$	0.022	$0.050 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1002	$0.0997^{+0.013}_{-0.014}$	$n_{s,0.002}$	0.9680	$0.9688^{+0.0097}_{-0.010}$	$\chi_{\text{MGS}}^2$	1.28	$1.42 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.224^{+0.091}_{-0.091}$	$Y_P$	0.245350	$0.24534^{+0.00013}_{-0.00013}$	$\chi_{\text{DR11CMass}}^2$	2.45	$2.82 (\nu: 0.2)$
$A_{217}^{\text{dust}EE}$	0.653	$0.65^{+0.25}_{-0.25}$	$Y_P^{\text{BBN}}$	0.246676	$0.24666^{+0.00013}_{-0.00013}$	$\chi_{\text{DR11LOWZ}}^2$	0.61	$0.66 (\nu: 0.1)$
$A_{100}^{\text{dust}TE}$	0.142	$0.140^{+0.073}_{-0.073}$	$10^5 D/H$	2.610	$2.614^{+0.054}_{-0.056}$	$\chi_{\text{prior}}^2$	6.9	$19.1 (\nu: 14.7)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.057}_{-0.057}$	Age/Gyr	13.8018	$13.801^{+0.042}_{-0.043}$	$\chi_{\text{CMB}}^2$	12928.6	$12949.5 (\nu: 23.7)$
$A_{100 \times 217}^{\text{dust}TE}$	0.304	$0.30^{+0.16}_{-0.16}$	$z_*$	1089.952	$1089.97^{+0.46}_{-0.47}$	$\chi_{\text{BAO}}^2$	4.35	$4.94 (\nu: 0.4)$

Best-fit  $\chi_{\text{eff}}^2 = 12939.87$ ;  $\bar{\chi}_{\text{eff}}^2 = 12973.56$ ;  $R - 1 = 0.00883$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.02 MGS: 1.28 DR11CMass: 2.45 DR11LOWZ: 0.61 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10497.61 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2430.98

## 6.10 base\_alpha1\_plikHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022274	$0.02226^{+0.00031}_{-0.00030}$	$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.16}_{-0.17}$	Age/Gyr	13.805	$13.802^{+0.054}_{-0.055}$
$\Omega_c h^2$	0.11924	$0.1189^{+0.0035}_{-0.0033}$	$A_{143}^{\text{dust}TE}$	0.154	$0.15^{+0.11}_{-0.10}$	$z_*$	1089.97	$1089.97^{+0.57}_{-0.57}$
$100\theta_{\text{MC}}$	1.04089	$1.04101^{+0.00084}_{-0.00093}$	$A_{143 \times 217}^{\text{dust}TE}$	0.336	$0.34^{+0.16}_{-0.16}$	$r_*$	144.70	$144.80^{+0.79}_{-0.86}$
$\tau$	0.0820	$0.081^{+0.034}_{-0.034}$	$A_{217}^{\text{dust}TE}$	1.668	$1.67^{+0.49}_{-0.49}$	$100\theta_*$	1.04108	$1.04121^{+0.00084}_{-0.00093}$
$\alpha_{-1}$	0.00004	$0.0004^{+0.0016}_{-0.0011}$	$c_{100}$	0.99819	$0.9981^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.899	$13.907^{+0.070}_{-0.075}$
$\ln(10^{10} A_s)$	3.097	$3.093^{+0.065}_{-0.066}$	$c_{217}$	0.99594	$0.9960^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.67	$1059.59^{+0.69}_{-0.65}$
$n_s$	0.9676	$0.968^{+0.012}_{-0.014}$	$H_0$	67.53	$67.7^{+1.5}_{-1.6}$	$r_{\text{drag}}$	147.40	$147.51^{+0.79}_{-0.87}$
$y_{\text{cal}}$	1.00039	$1.0005^{+0.0049}_{-0.0049}$	$\Omega_\Lambda$	0.6883	$0.690^{+0.020}_{-0.022}$	$k_D$	0.14047	$0.14034^{+0.00095}_{-0.00085}$
$A_{217}^{\text{CIB}}$	65.2	$64^{+10}_{-10}$	$\Omega_m$	0.3117	$0.310^{+0.022}_{-0.020}$	$100\theta_D$	0.160910	$0.16097^{+0.00041}_{-0.00043}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.25	—	$\Omega_m h^2$	0.14216	$0.1418^{+0.0034}_{-0.0032}$	$z_{\text{eq}}$	3382	$3374^{+82}_{-77}$
$A_{143}^{\text{tSZ}}$	7.11	$5.4^{+3.6}_{-3.8}$	$\Omega_m h^3$	0.09600	$0.09597^{+0.00061}_{-0.00059}$	$k_{\text{eq}}$	0.010321	$0.01030^{+0.00025}_{-0.00023}$
$A_{100}^{\text{PS}}$	252	$259^{+50}_{-50}$	$\sigma_8$	0.8322	$0.830^{+0.026}_{-0.026}$	$100\theta_{\text{eq}}$	0.8167	$0.818^{+0.015}_{-0.015}$
$A_{143}^{\text{PS}}$	41.2	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4646	$0.462^{+0.022}_{-0.021}$	$100\theta_{s,\text{eq}}$	0.4512	$0.4521^{+0.0076}_{-0.0079}$
$A_{143 \times 217}^{\text{PS}}$	39.5	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6218	$0.619^{+0.022}_{-0.022}$	$r_{\text{drag}}/D_V(0.57)$	0.07157	$0.0717^{+0.0012}_{-0.0012}$
$A_{217}^{\text{PS}}$	100.0	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0127	$1.009^{+0.033}_{-0.033}$	$H(0.57)$	92.96	$93.02^{+0.64}_{-0.62}$
$A^{\text{kSZ}}$	0.00	$< 7.63$	$\langle d^2 \rangle^{1/2}$	2.502	$2.495^{+0.082}_{-0.082}$	$D_A(0.57)$	1388.7	$1387^{+21}_{-20}$
$A_{100}^{\text{dust}TT}$	7.46	$7.4^{+3.6}_{-3.7}$	$z_{\text{re}}$	10.33	$10.1^{+3.1}_{-3.1}$	$F_{\text{AP}}(0.57)$	0.6761	$0.6756^{+0.0056}_{-0.0051}$
$A_{143}^{\text{dust}TT}$	8.94	$8.9^{+3.6}_{-3.6}$	$10^9 A_s$	2.214	$2.21^{+0.15}_{-0.14}$	$f\sigma_8(0.57)$	0.4839	$0.482^{+0.016}_{-0.016}$
$A_{143 \times 217}^{\text{dust}TT}$	17.7	$17.0^{+8.2}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8791	$1.877^{+0.027}_{-0.026}$	$\sigma_8(0.57)$	0.6190	$0.618^{+0.020}_{-0.020}$
$A_{217}^{\text{dust}TT}$	82.2	$82^{+10}_{-10}$	$D_{40}$	1240.8	$1245^{+29}_{-29}$	$f_{2000}^{143}$	28.6	$29^{+5}_{-5}$
$A_{100}^{\text{dust}EE}$	0.0812	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5725	$5727^{+78}_{-75}$	$f_{2000}^{143 \times 217}$	31.75	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0486	$0.0485^{+0.0099}_{-0.0098}$	$D_{810}$	2535.6	$2534^{+27}_{-26}$	$f_{2000}^{217}$	105.33	$105.7^{+3.7}_{-3.7}$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.100^{+0.064}_{-0.063}$	$D_{1420}$	815.7	$815.4^{+9.4}_{-9.2}$	$\chi_{\text{lowTEB}}^2$	10497.6	10499.1 ( $\nu$ : 4.6)
$A_{143}^{\text{dust}EE}$	0.09999	$0.0998^{+0.014}_{-0.014}$	$D_{2000}$	230.89	$230.7^{+3.2}_{-3.1}$	$\chi_{\text{plik}}^2$	2430.9	2450.9 ( $\nu$ : 26.3)
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.224^{+0.091}_{-0.092}$	$n_{s,0.002}$	0.9676	$0.968^{+0.012}_{-0.014}$	$\chi_{\text{JLA}}^2$	706.75	706.79 ( $\nu$ : 0.1)
$A_{217}^{\text{dust}EE}$	0.648	$0.65^{+0.25}_{-0.25}$	$Y_P$	0.245350	$0.24534^{+0.00014}_{-0.00014}$	$\chi_{\text{prior}}^2$	6.9	19.2 ( $\nu$ : 14.7)
$A_{100}^{\text{dust}TE}$	0.143	$0.140^{+0.074}_{-0.073}$	$Y_P^{\text{BBN}}$	0.246677	$0.24667^{+0.00014}_{-0.00014}$	$\chi_{\text{CMB}}^2$	12928.5	12950.0 ( $\nu$ : 24.3)
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.057}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.609	$2.613^{+0.057}_{-0.059}$			

Best-fit  $\chi_{\text{eff}}^2 = 13642.15$ ;  $\bar{\chi}_{\text{eff}}^2 = 13675.99$ ;  $R - 1 = 0.00918$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10497.60 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2430.94 SN - JLA December\_2013: 706.75

## 6.11 base\_alpha1\_plikHM\_TTTEEE\_lowTEB\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022256	$0.02224^{+0.00031}_{-0.00030}$	$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.17}_{-0.17}$	Age/Gyr	13.800	$13.795^{+0.055}_{-0.056}$
$\Omega_c h^2$	0.11875	$0.1183^{+0.0034}_{-0.0031}$	$A_{143}^{\text{dustTE}}$	0.155	$0.15^{+0.11}_{-0.10}$	$z_*$	1089.95	$1089.93^{+0.59}_{-0.58}$
$100\theta_{\text{MC}}$	1.04103	$1.04117^{+0.00082}_{-0.00087}$	$A_{143 \times 217}^{\text{dustTE}}$	0.338	$0.34^{+0.16}_{-0.16}$	$r_*$	144.84	$144.98^{+0.74}_{-0.80}$
$\tau$	0.0644	$0.066^{+0.027}_{-0.028}$	$A_{217}^{\text{dustTE}}$	1.666	$1.66^{+0.48}_{-0.48}$	$100\theta_*$	1.04123	$1.04137^{+0.00081}_{-0.00086}$
$\alpha_{-1}$	0.00011	$0.0006^{+0.0016}_{-0.0012}$	$c_{100}$	0.99817	$0.9981^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.911	$13.922^{+0.067}_{-0.070}$
$\ln(10^{10} A_s)$	3.0598	$3.062^{+0.049}_{-0.050}$	$c_{217}$	0.99612	$0.9961^{+0.0029}_{-0.0029}$	$z_{\text{drag}}$	1059.59	$1059.51^{+0.65}_{-0.67}$
$n_s$	0.9681	$0.970^{+0.012}_{-0.013}$	$H_0$	67.74	$68.0^{+1.4}_{-1.5}$	$r_{\text{drag}}$	147.55	$147.70^{+0.74}_{-0.80}$
$y_{\text{cal}}$	1.00010	$1.0002^{+0.0049}_{-0.0049}$	$\Omega_\Lambda$	0.6913	$0.694^{+0.020}_{-0.021}$	$k_D$	0.14030	$0.14013^{+0.00086}_{-0.00083}$
$A_{217}^{\text{CIB}}$	67.8	$64^{+10}_{-10}$	$\Omega_m$	0.3087	$0.306^{+0.021}_{-0.020}$	$100\theta_D$	0.160973	$0.16103^{+0.00039}_{-0.00039}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.03	—	$\Omega_m h^2$	0.14165	$0.1411^{+0.0032}_{-0.0031}$	$z_{\text{eq}}$	3370	$3358^{+77}_{-75}$
$A_{143}^{\text{tSZ}}$	7.30	$5.4^{+3.7}_{-3.8}$	$\Omega_m h^3$	0.09595	$0.09590^{+0.00059}_{-0.00058}$	$k_{\text{eq}}$	0.010284	$0.01025^{+0.00024}_{-0.00023}$
$A_{100}^{\text{PS}}$	257	$260^{+50}_{-50}$	$\sigma_8$	0.8157	$0.816^{+0.017}_{-0.017}$	$100\theta_{\text{eq}}$	0.8189	$0.821^{+0.014}_{-0.015}$
$A_{143}^{\text{PS}}$	39.0	$44^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4532	$0.451^{+0.015}_{-0.015}$	$100\theta_{s,\text{eq}}$	0.4524	$0.4536^{+0.0071}_{-0.0076}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6080	$0.607^{+0.014}_{-0.014}$	$r_{\text{drag}}/D_V(0.57)$	0.07175	$0.0719^{+0.0011}_{-0.0012}$
$A_{217}^{\text{PS}}$	96.7	$97^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9911	$0.990^{+0.020}_{-0.021}$	$H(0.57)$	93.04	$93.12^{+0.63}_{-0.61}$
$A^{\text{kSZ}}$	0.00	$< 8.09$	$\langle d^2 \rangle^{1/2}$	2.4511	$2.448^{+0.049}_{-0.049}$	$D_A(0.57)$	1386.0	$1383^{+20}_{-19}$
$A_{100}^{\text{dustTT}}$	7.40	$7.5^{+3.6}_{-3.7}$	$z_{\text{re}}$	8.69	$8.8^{+2.6}_{-2.7}$	$F_{\text{AP}}(0.57)$	0.6753	$0.6746^{+0.0054}_{-0.0049}$
$A_{143}^{\text{dustTT}}$	9.02	$9.0^{+3.6}_{-3.6}$	$10^9 A_s$	2.132	$2.14^{+0.11}_{-0.11}$	$f\sigma_8(0.57)$	0.4735	$0.4730^{+0.0098}_{-0.0099}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.2^{+8.1}_{-8.1}$	$10^9 A_s e^{-2\tau}$	1.8746	$1.872^{+0.025}_{-0.025}$	$\sigma_8(0.57)$	0.6075	$0.609^{+0.015}_{-0.016}$
$A_{217}^{\text{dustTT}}$	81.8	$82^{+10}_{-10}$	$D_{40}$	1235.3	$1239^{+27}_{-27}$	$f_{2000}^{143}$	29.7	$30^{+5}_{-5}$
$A_{100}^{\text{dustEE}}$	0.0812	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5723	$5721^{+79}_{-73}$	$f_{2000}^{143 \times 217}$	32.54	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0485	$0.0485^{+0.0098}_{-0.0098}$	$D_{810}$	2533.1	$2532^{+27}_{-25}$	$f_{2000}^{217}$	106.06	$106.0^{+3.6}_{-3.6}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.100^{+0.063}_{-0.062}$	$D_{1420}$	815.1	$815.4^{+9.5}_{-9.2}$	$\chi^2_{\text{lensing}}$	9.60	10.1 ( $\nu$ : 1.4)
$A_{143}^{\text{dustEE}}$	0.0998	$0.0998^{+0.014}_{-0.013}$	$D_{2000}$	230.26	$230.4^{+3.3}_{-3.1}$	$\chi^2_{\text{lowTEB}}$	10496.31	10497.8 ( $\nu$ : 2.3)
$A_{143 \times 217}^{\text{dustEE}}$	0.223	$0.225^{+0.091}_{-0.091}$	$n_{s,0.002}$	0.9681	$0.970^{+0.012}_{-0.013}$	$\chi^2_{\text{plik}}$	2433.6	2453.2 ( $\nu$ : 24.4)
$A_{217}^{\text{dustEE}}$	0.650	$0.66^{+0.25}_{-0.25}$	$Y_P$	0.245343	$0.24533^{+0.00014}_{-0.00014}$	$\chi^2_{\text{prior}}$	7.1	19.2 ( $\nu$ : 14.8)
$A_{100}^{\text{dustTE}}$	0.139	$0.140^{+0.073}_{-0.072}$	$Y_P^{\text{BBN}}$	0.246669	$0.24666^{+0.00014}_{-0.00014}$	$\chi^2_{\text{CMB}}$	12939.6	12961.0 ( $\nu$ : 24.1)
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.058}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.613	$2.616^{+0.058}_{-0.058}$			

Best-fit  $\chi^2_{\text{eff}} = 12946.63$ ;  $\bar{\chi}^2_{\text{eff}} = 12980.28$ ;  $R - 1 = 0.02079$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.60 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.31 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2433.65



## 6.12 base\_alpha1\_plikHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022297	$0.02226^{+0.00032}_{-0.00030}$	$A_{100 \times 217}^{\text{dustTE}}$	0.304	$0.30^{+0.16}_{-0.17}$	Age/Gyr	13.801	$13.800^{+0.055}_{-0.055}$
$\Omega_c h^2$	0.11906	$0.1188^{+0.0036}_{-0.0034}$	$A_{143}^{\text{dustTE}}$	0.155	$0.15^{+0.11}_{-0.10}$	$z_*$	1089.93	$1089.95^{+0.58}_{-0.58}$
$100\theta_{\text{MC}}$	1.04093	$1.04103^{+0.00085}_{-0.00094}$	$A_{143 \times 217}^{\text{dustTE}}$	0.338	$0.34^{+0.16}_{-0.16}$	$r_*$	144.73	$144.82^{+0.80}_{-0.88}$
$\tau$	0.0838	$0.081^{+0.034}_{-0.034}$	$A_{217}^{\text{dustTE}}$	1.675	$1.67^{+0.49}_{-0.49}$	$100\theta_*$	1.04112	$1.04123^{+0.00085}_{-0.00094}$
$\alpha_{-1}$	0.00004	$0.0004^{+0.0016}_{-0.0011}$	$c_{100}$	0.99821	$0.9981^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.901	$13.909^{+0.071}_{-0.076}$
$\ln(10^{10} A_s)$	3.101	$3.094^{+0.065}_{-0.065}$	$c_{217}$	0.99582	$0.9960^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.70	$1059.60^{+0.68}_{-0.66}$
$n_s$	0.9684	$0.969^{+0.013}_{-0.014}$	$H_0$	67.62	$67.7^{+1.5}_{-1.6}$	$r_{\text{drag}}$	147.42	$147.53^{+0.81}_{-0.89}$
$y_{\text{cal}}$	1.00036	$1.0005^{+0.0049}_{-0.0049}$	$\Omega_\Lambda$	0.6895	$0.691^{+0.022}_{-0.022}$	$k_D$	0.14046	$0.14033^{+0.00097}_{-0.00086}$
$A_{217}^{\text{CIB}}$	63.1	$64^{+10}_{-10}$	$\Omega_m$	0.3105	$0.309^{+0.022}_{-0.022}$	$100\theta_D$	0.160891	$0.16096^{+0.00041}_{-0.00043}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.52	—	$\Omega_m h^2$	0.14200	$0.1417^{+0.0035}_{-0.0032}$	$z_{\text{eq}}$	3378	$3371^{+84}_{-78}$
$A_{143}^{\text{tSZ}}$	6.80	$5.4^{+3.6}_{-3.7}$	$\Omega_m h^3$	0.09603	$0.09597^{+0.00061}_{-0.00058}$	$k_{\text{eq}}$	0.010310	$0.01029^{+0.00026}_{-0.00024}$
$A_{100}^{\text{PS}}$	251	$258^{+50}_{-50}$	$\sigma_8$	0.8332	$0.830^{+0.026}_{-0.026}$	$100\theta_{\text{eq}}$	0.8174	$0.819^{+0.015}_{-0.016}$
$A_{143}^{\text{PS}}$	45.9	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4643	$0.462^{+0.022}_{-0.021}$	$100\theta_{s,\text{eq}}$	0.4516	$0.4523^{+0.0078}_{-0.0082}$
$A_{143 \times 217}^{\text{PS}}$	47.5	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6220	$0.619^{+0.022}_{-0.022}$	$r_{\text{drag}}/D_V(0.57)$	0.07163	$0.0717^{+0.0012}_{-0.0013}$
$A_{217}^{\text{PS}}$	103.9	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0132	$1.009^{+0.033}_{-0.033}$	$H(0.57)$	93.01	$93.04^{+0.65}_{-0.64}$
$A^{\text{kSZ}}$	0.00	$< 7.61$	$\langle d^2 \rangle^{1/2}$	2.503	$2.494^{+0.082}_{-0.082}$	$D_A(0.57)$	1387.4	$1386^{+21}_{-20}$
$A_{100}^{\text{dustTT}}$	7.34	$7.4^{+3.6}_{-3.7}$	$z_{\text{re}}$	10.48	$10.2^{+3.1}_{-3.1}$	$F_{\text{AP}}(0.57)$	0.6758	$0.6754^{+0.0057}_{-0.0052}$
$A_{143}^{\text{dustTT}}$	8.93	$8.9^{+3.6}_{-3.6}$	$10^9 A_s$	2.222	$2.21^{+0.15}_{-0.14}$	$f\sigma_8(0.57)$	0.4842	$0.482^{+0.016}_{-0.016}$
$A_{143 \times 217}^{\text{dustTT}}$	18.1	$17.0^{+8.2}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8790	$1.876^{+0.028}_{-0.026}$	$\sigma_8(0.57)$	0.6201	$0.618^{+0.020}_{-0.020}$
$A_{217}^{\text{dustTT}}$	82.6	$82^{+10}_{-10}$	$D_{40}$	1240.7	$1245^{+29}_{-29}$	$f_{2000}^{143}$	28.3	$29^{+5}_{-5}$
$A_{100}^{\text{dustEE}}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5727	$5727^{+78}_{-75}$	$f_{2000}^{143 \times 217}$	31.60	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0488	$0.0485^{+0.0099}_{-0.0098}$	$D_{810}$	2536.5	$2534^{+27}_{-26}$	$f_{2000}^{217}$	105.07	$105.6^{+3.7}_{-3.7}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.100^{+0.064}_{-0.063}$	$D_{1420}$	816.3	$815.4^{+9.4}_{-9.2}$	$\chi_{\text{lowTEB}}^2$	10497.8	$10499.2 (\nu: 4.7)$
$A_{143}^{\text{dustEE}}$	0.1003	$0.0998^{+0.014}_{-0.014}$	$D_{2000}$	231.15	$230.8^{+3.2}_{-3.2}$	$\chi_{\text{plik}}^2$	2431.2	$2450.9 (\nu: 26.3)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.224^{+0.091}_{-0.092}$	$n_{s,0.002}$	0.9684	$0.969^{+0.013}_{-0.014}$	$\chi_{\text{H070p6}}^2$	0.80	$0.80 (\nu: 0.1)$
$A_{217}^{\text{dustEE}}$	0.651	$0.65^{+0.25}_{-0.25}$	$Y_P$	0.245361	$0.24534^{+0.00014}_{-0.00014}$	$\chi_{\text{prior}}^2$	6.6	$19.2 (\nu: 14.7)$
$A_{100}^{\text{dustTE}}$	0.140	$0.140^{+0.074}_{-0.073}$	$Y_P^{\text{BBN}}$	0.246687	$0.24667^{+0.00014}_{-0.00014}$	$\chi_{\text{CMB}}^2$	12928.9	$12950.1 (\nu: 24.5)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.131^{+0.057}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.605	$2.612^{+0.057}_{-0.059}$			

Best-fit  $\chi_{\text{eff}}^2 = 12936.26$ ;  $\bar{\chi}_{\text{eff}}^2 = 12970.07$ ;  $R - 1 = 0.00953$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10497.75 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.15 Hubble - H070p6: 0.80

### 6.13 base\_alpha1\_plikHM\_TTTEEE\_lowTEB\_post\_lensing\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022267	$0.02224^{+0.00029}_{-0.00028}$	$A_{143 \times 217}^{\text{dust}TE}$	0.338	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.9175	$13.922^{+0.048}_{-0.049}$
$\Omega_c h^2$	0.11841	$0.1183^{+0.0022}_{-0.0021}$	$A_{217}^{\text{dust}TE}$	1.663	$1.66^{+0.48}_{-0.48}$	$z_{\text{drag}}$	1059.59	$1059.51^{+0.64}_{-0.66}$
$100\theta_{\text{MC}}$	1.04109	$1.04118^{+0.00070}_{-0.00070}$	$c_{100}$	0.99814	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.63	$147.70^{+0.54}_{-0.57}$
$\tau$	0.0660	$0.066^{+0.023}_{-0.024}$	$c_{217}$	0.99609	$0.9961^{+0.0029}_{-0.0029}$	$k_D$	0.14022	$0.14013^{+0.00069}_{-0.00067}$
$\alpha_{-1}$	0.00014	$0.0006^{+0.0015}_{-0.0011}$	$H_0$	67.89	$67.95^{+0.97}_{-0.98}$	$100\theta_D$	0.160978	$0.16103^{+0.00038}_{-0.00040}$
$\ln(10^{10} A_s)$	3.0620	$3.061^{+0.044}_{-0.046}$	$\Omega_\Lambda$	0.6933	$0.694^{+0.013}_{-0.013}$	$z_{\text{eq}}$	3361.8	$3357^{+50}_{-49}$
$n_s$	0.9690	$0.9704^{+0.0091}_{-0.0097}$	$\Omega_m$	0.3067	$0.306^{+0.013}_{-0.013}$	$k_{\text{eq}}$	0.010261	$0.01025^{+0.00015}_{-0.00015}$
$y_{\text{cal}}$	1.00006	$1.0002^{+0.0048}_{-0.0049}$	$\Omega_m h^2$	0.14133	$0.1411^{+0.0021}_{-0.0020}$	$100\theta_{\text{eq}}$	0.8204	$0.8213^{+0.0094}_{-0.0094}$
$A_{217}^{\text{CIB}}$	67.7	$64^{+10}_{-10}$	$\Omega_m h^3$	0.09594	$0.09590^{+0.00060}_{-0.00059}$	$100\theta_{s,\text{eq}}$	0.45318	$0.4536^{+0.0049}_{-0.0048}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.03	—	$\sigma_8$	0.8159	$0.816^{+0.017}_{-0.017}$	$r_{\text{drag}}/D_V(0.57)$	0.07187	$0.07194^{+0.00075}_{-0.00076}$
$A_{143}^{\text{tSZ}}$	7.30	$5.3^{+3.7}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	0.4518	$0.451^{+0.012}_{-0.012}$	$H(0.57)$	93.094	$93.11^{+0.44}_{-0.44}$
$A_{100}^{\text{PS}}$	257	$260^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6072	$0.607^{+0.013}_{-0.013}$	$D_A(0.57)$	1384.1	$1383^{+13}_{-13}$
$A_{143}^{\text{PS}}$	38.8	$44^{+10}_{-20}$	$\sigma_8/h^{0.5}$	0.9902	$0.990^{+0.020}_{-0.020}$	$F_{\text{AP}}(0.57)$	0.67480	$0.6746^{+0.0034}_{-0.0032}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4491	$2.448^{+0.048}_{-0.048}$	$f\sigma_8(0.57)$	0.4731	$0.4731^{+0.0097}_{-0.0097}$
$A_{217}^{\text{PS}}$	96.7	$97^{+20}_{-20}$	$z_{\text{re}}$	8.84	$8.8^{+2.3}_{-2.4}$	$\sigma_8(0.57)$	0.6081	$0.609^{+0.013}_{-0.013}$
$A^{\text{kSZ}}$	0.00	$< 8.04$	$10^9 A_s$	2.137	$2.136^{+0.095}_{-0.097}$	$f_{2000}^{143}$	29.69	$30^{+5}_{-5}$
$A_{100}^{\text{dust}TT}$	7.41	$7.5^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8727	$1.872^{+0.022}_{-0.021}$	$f_{2000}^{143 \times 217}$	32.51	$32.5^{+3.5}_{-3.6}$
$A_{143}^{\text{dust}TT}$	9.05	$9.0^{+3.5}_{-3.6}$	$D_{40}$	1234.8	$1240^{+27}_{-27}$	$f_{2000}^{217}$	106.02	$106.0^{+3.6}_{-3.5}$
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.2^{+8.2}_{-8.0}$	$D_{220}$	5722	$5721^{+79}_{-73}$	$\chi^2_{\text{lensing}}$	9.45	$10.1 (\nu: 1.3)$
$A_{217}^{\text{dust}TT}$	81.9	$82^{+10}_{-10}$	$D_{810}$	2532.2	$2532^{+27}_{-26}$	$\chi^2_{\text{lowTEB}}$	10496.37	$10497.7 (\nu: 2.1)$
$A_{100}^{\text{dust}EE}$	0.0811	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	815.1	$815.4^{+9.1}_{-9.1}$	$\chi^2_{\text{plik}}$	2433.7	$2452.6 (\nu: 23.6)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0486	$0.0484^{+0.0097}_{-0.0096}$	$D_{2000}$	230.29	$230.4^{+3.1}_{-3.0}$	$\chi^2_{\text{H070p6}}$	0.669	$0.66 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.100	$0.0999^{+0.062}_{-0.062}$	$n_{s,0.002}$	0.9690	$0.9704^{+0.0091}_{-0.0097}$	$\chi^2_{\text{JLA}}$	706.627	$706.64 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.0999	$0.0998^{+0.013}_{-0.013}$	$Y_P$	0.245348	$0.24533^{+0.00013}_{-0.00013}$	$\chi^2_{6\text{DF}}$	0.003	$0.032 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.224^{+0.092}_{-0.091}$	$Y_P^{\text{BBN}}$	0.246674	$0.24666^{+0.00013}_{-0.00013}$	$\chi^2_{\text{MGS}}$	1.54	$1.69 (\nu: 0.1)$
$A_{217}^{\text{dust}EE}$	0.657	$0.66^{+0.25}_{-0.25}$	$10^5 D/H$	2.611	$2.616^{+0.053}_{-0.054}$	$\chi^2_{\text{DR11CMass}}$	2.41	$2.79 (\nu: 0.2)$
$A_{100}^{\text{dust}TE}$	0.142	$0.141^{+0.074}_{-0.073}$	$\text{Age/Gyr}$	13.7960	$13.795^{+0.043}_{-0.041}$	$\chi^2_{\text{DR11LOWZ}}$	0.37	$0.41 (\nu: 0.1)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.058}_{-0.058}$	$z_*$	1089.909	$1089.93^{+0.46}_{-0.45}$	$\chi^2_{\text{prior}}$	7.1	$19.2 (\nu: 14.7)$
$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.17}_{-0.16}$	$r_*$	144.92	$144.98^{+0.52}_{-0.54}$	$\chi^2_{\text{CMB}}$	12939.5	$12960.4 (\nu: 23.3)$
$A_{143}^{\text{dust}TE}$	0.153	$0.15^{+0.11}_{-0.10}$	$100\theta_*$	1.04129	$1.04138^{+0.00070}_{-0.00070}$	$\chi^2_{\text{BAO}}$	4.32	$4.93 (\nu: 0.3)$

Best-fit  $\chi^2_{\text{eff}} = 13658.28$ ;  $\bar{\chi}^2_{\text{eff}} = 13691.81$ ;  $R - 1 = 0.02241$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.54 DR11CMass: 2.41 DR11LOWZ: 0.37 CMB - smica\_g30\_ftl\_full\_pp: 9.45 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.37 plik\_dx11dr2\_HM\_v18\_TTT

## 6.14 base\_alpha1\_plikHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02225^{+0.00031}_{-0.00029}$	$A_{100 \times 217}^{\text{dust}TE}$	$0.30^{+0.16}_{-0.17}$	Age/Gyr	$13.805^{+0.055}_{-0.057}$
$\Omega_c h^2$	$0.1192^{+0.0037}_{-0.0035}$	$A_{143}^{\text{dust}TE}$	$0.15^{+0.11}_{-0.10}$	$z_*$	$1090.00^{+0.58}_{-0.59}$
$100\theta_{\text{MC}}$	$1.04096^{+0.00087}_{-0.00096}$	$A_{143 \times 217}^{\text{dust}TE}$	$0.34^{+0.16}_{-0.16}$	$r_*$	$144.74^{+0.82}_{-0.89}$
$\tau$	$0.080^{+0.033}_{-0.033}$	$A_{217}^{\text{dust}TE}$	$1.67^{+0.49}_{-0.49}$	$100\theta_*$	$1.04116^{+0.00087}_{-0.00096}$
$\alpha_{-1}$	$0.0003^{+0.0016}_{-0.0012}$	$c_{100}$	$0.9981^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	$13.902^{+0.074}_{-0.079}$
$\ln(10^{10} A_s)$	$3.094^{+0.064}_{-0.060}$	$c_{217}$	$0.9960^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	$1059.59^{+0.69}_{-0.65}$
$n_s$	$0.968^{+0.013}_{-0.014}$	$H_0$	$67.6^{+1.6}_{-1.6}$	$r_{\text{drag}}$	$147.45^{+0.83}_{-0.91}$
$y_{\text{cal}}$	$1.0005^{+0.0049}_{-0.0049}$	$\Omega_\Lambda$	$0.689^{+0.021}_{-0.023}$	$k_D$	$0.14040^{+0.00097}_{-0.00089}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$\Omega_m$	$0.311^{+0.023}_{-0.021}$	$100\theta_D$	$0.16096^{+0.00041}_{-0.00043}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\Omega_m h^2$	$0.1421^{+0.0036}_{-0.0033}$	$z_{\text{eq}}$	$3380^{+86}_{-80}$
$A_{143}^{\text{tSZ}}$	$5.4^{+3.6}_{-3.8}$	$\Omega_m h^3$	$0.09597^{+0.00061}_{-0.00058}$	$k_{\text{eq}}$	$0.01031^{+0.00026}_{-0.00024}$
$A_{100}^{\text{PS}}$	$259^{+50}_{-50}$	$\sigma_8$	$0.831^{+0.025}_{-0.024}$	$100\theta_{\text{eq}}$	$0.817^{+0.015}_{-0.016}$
$A_{143}^{\text{PS}}$	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	$0.464^{+0.023}_{-0.021}$	$100\theta_{\text{s,eq}}$	$0.4515^{+0.0080}_{-0.0084}$
$A_{143 \times 217}^{\text{PS}}$	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	$0.621^{+0.022}_{-0.021}$	$r_{\text{drag}}/D_V(0.57)$	$0.0716^{+0.0012}_{-0.0013}$
$A_{217}^{\text{PS}}$	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	$1.011^{+0.033}_{-0.032}$	$H(0.57)$	$92.98^{+0.67}_{-0.64}$
$A^{\text{kSZ}}$	$< 7.64$	$\langle d^2 \rangle^{1/2}$	$2.499^{+0.082}_{-0.079}$	$D_A(0.57)$	$1388^{+21}_{-21}$
$A_{100}^{\text{dust}TT}$	$7.4^{+3.6}_{-3.7}$	$z_{\text{re}}$	$10.1^{+2.8}_{-2.9}$	$F_{\text{AP}}(0.57)$	$0.6760^{+0.0058}_{-0.0054}$
$A_{143}^{\text{dust}TT}$	$8.9^{+3.7}_{-3.6}$	$10^9 A_s$	$2.21^{+0.14}_{-0.14}$	$f\sigma_8(0.57)$	$0.483^{+0.016}_{-0.015}$
$A_{143 \times 217}^{\text{dust}TT}$	$17.0^{+8.2}_{-8.1}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.028}_{-0.027}$	$\sigma_8(0.57)$	$0.618^{+0.020}_{-0.019}$
$A_{217}^{\text{dust}TT}$	$82^{+10}_{-10}$	$D_{40}$	$1245^{+29}_{-29}$	$f_{2000}^{143}$	$29^{+5}_{-5}$
$A_{100}^{\text{dust}EE}$	$0.081^{+0.011}_{-0.011}$	$D_{220}$	$5727^{+78}_{-75}$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dust}EE}$	$0.0485^{+0.0099}_{-0.0098}$	$D_{810}$	$2535^{+27}_{-26}$	$f_{2000}^{217}$	$105.7^{+3.7}_{-3.7}$
$A_{100 \times 217}^{\text{dust}EE}$	$0.100^{+0.064}_{-0.063}$	$D_{1420}$	$815.2^{+9.4}_{-9.2}$	$\chi_{\text{lowTEB}}^2$	$10499.0 (\nu: 4.6)$
$A_{143}^{\text{dust}EE}$	$0.0998^{+0.014}_{-0.014}$	$D_{2000}$	$230.6^{+3.2}_{-3.2}$	$\chi_{\text{plik}}^2$	$2451.1 (\nu: 26.5)$
$A_{143 \times 217}^{\text{dust}EE}$	$0.224^{+0.091}_{-0.092}$	$n_{\text{s},0.002}$	$0.968^{+0.013}_{-0.014}$	$\chi_{\text{prior}}^2$	$19.2 (\nu: 14.7)$
$A_{217}^{\text{dust}EE}$	$0.65^{+0.25}_{-0.25}$	$Y_{\text{P}}$	$0.24534^{+0.00014}_{-0.00014}$	$\chi_{\text{CMB}}^2$	$12950.0 (\nu: 24.1)$
$A_{100}^{\text{dust}TE}$	$0.140^{+0.074}_{-0.073}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24666^{+0.00014}_{-0.00014}$		
$A_{100 \times 143}^{\text{dust}TE}$	$0.131^{+0.057}_{-0.057}$	$10^5 \text{D/H}$	$2.615^{+0.057}_{-0.059}$		

 $\bar{\chi}_{\text{eff}}^2 = 12969.17; R - 1 = 0.00901$

## 6.15 base\_alpha1\_CamSpecHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02229	$0.02240^{+0.00050}_{-0.00050}$ (+0.0 $\sigma$ )	$\beta_1^1$	-0.07	$-0.1^{+2.0}_{-2.0}$	$r_*$	144.47	$144.4^{+1.0}_{-1.0}$ (+0.1 $\sigma$ )
$\Omega_c h^2$	0.12010	$0.1201^{+0.0045}_{-0.0043}$ (-0.1 $\sigma$ )	$H_0$	67.17	$67.3^{+2.0}_{-2.0}$ (+0.1 $\sigma$ )	$100\theta_*$	1.04086	$1.0408^{+0.0010}_{-0.0010}$ (+0.2 $\sigma$ )
$100\theta_{\text{MC}}$	1.04066	$1.0406^{+0.0010}_{-0.0010}$ (+0.2 $\sigma$ )	$\Omega_\Lambda$	0.6830	$0.683^{+0.026}_{-0.029}$ (+0.1 $\sigma$ )	$z_{\text{drag}}$	1059.74	$1060.0^{+1.0}_{-1.1}$ (-0.0 $\sigma$ )
$\tau$	0.0828	$0.090^{+0.041}_{-0.041}$ (+0.1 $\sigma$ )	$\Omega_m$	0.3170	$0.317^{+0.029}_{-0.026}$ (-0.1 $\sigma$ )	$r_{\text{drag}}$	147.15	$147.1^{+1.0}_{-1.0}$ (+0.1 $\sigma$ )
$\alpha_{-1}$	-0.00073	$-0.0023^{+0.0034}_{-0.0047}$ (+0.1 $\sigma$ )	$\Omega_m h^2$	0.14303	$0.1431^{+0.0043}_{-0.0042}$ (-0.1 $\sigma$ )	$k_D$	0.14076	$0.1409^{+0.0011}_{-0.0012}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.100	$3.114^{+0.081}_{-0.082}$ (-0.0 $\sigma$ )	$\Omega_m h^3$	0.09608	$0.09622^{+0.00092}_{-0.00094}$ (-0.0 $\sigma$ )	$100\theta_D$	0.16080	$0.16066^{+0.00064}_{-0.00064}$ (-0.0 $\sigma$ )
$n_s$	0.9632	$0.962^{+0.014}_{-0.014}$ (+0.4 $\sigma$ )	$\sigma_8$	0.8316	$0.835^{+0.030}_{-0.031}$ (-0.0 $\sigma$ )	$z_{\text{eq}}$	3403	$3404^{+100}_{-99}$ (-0.1 $\sigma$ )
$y_{\text{cal}}$	1.00041	$1.0003^{+0.0050}_{-0.0049}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4683	$0.470^{+0.027}_{-0.027}$ (-0.1 $\sigma$ )	$100\theta_{\text{eq}}$	0.8128	$0.813^{+0.019}_{-0.019}$ (+0.1 $\sigma$ )
$A_{100}^{\text{PS}}$	249.1	$245^{+40}_{-40}$ (-0.5 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6240	$0.627^{+0.027}_{-0.028}$ (-0.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07125	$0.0713^{+0.0015}_{-0.0015}$ (+0.1 $\sigma$ )
$A_{143}^{\text{PS}}$	35.7	$38^{+20}_{-20}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0147	$1.019^{+0.040}_{-0.041}$ (-0.1 $\sigma$ )	$H(0.57)$	92.84	$92.91^{+0.86}_{-0.81}$ (+0.1 $\sigma$ )
$A_{217}^{\text{PS}}$	96.4	$98^{+30}_{-30}$ (+0.1 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.506	$2.517^{+0.096}_{-0.10}$ (-0.2 $\sigma$ )	$D_A(0.57)$	1393.3	$1392^{+26}_{-26}$ (-0.1 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.5	$46^{+10}_{-10}$ (-2.7 $\sigma$ )	$z_{\text{re}}$	10.41	$10.9^{+3.6}_{-3.7}$ (+0.1 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6774	$0.6773^{+0.0071}_{-0.0068}$ (-0.1 $\sigma$ )
$A_{143}^{\text{tSZ}}$	3.32	< 6.63 (-1.0 $\sigma$ )	$10^9 A_s$	2.220	$2.25^{+0.19}_{-0.18}$ (-0.0 $\sigma$ )	$f\sigma_8(0.57)$	0.4849	$0.487^{+0.019}_{-0.020}$ (-0.1 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.423	$0.51^{+0.23}_{-0.21}$	$10^9 A_s e^{-2\tau}$	1.8811	$1.882^{+0.029}_{-0.029}$ (-0.4 $\sigma$ )	$\sigma_8(0.57)$	0.6173	$0.620^{+0.024}_{-0.024}$ (+0.0 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$D_{40}$	1215.8	$1209^{+39}_{-38}$ (-0.4 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246269	$0.24631^{+0.00021}_{-0.00022}$ (-3.7 $\sigma$ )
$A^{\text{kSZ}}$	4.9	—	$D_{220}$	5701	$5705^{+82}_{-81}$ (-0.5 $\sigma$ )	$f_{2000}^{143}$	29.2	$29^{+6}_{-6}$ (-0.4 $\sigma$ )
$A_{100}^{\text{dust}}$	0.999	$0.99^{+0.38}_{-0.38}$	$D_{810}$	2532.1	$2533^{+28}_{-27}$ (-0.3 $\sigma$ )	$f_{2000}^{217}$	106.68	$106.1^{+4.1}_{-4.1}$ (+0.1 $\sigma$ )
$A_{143}^{\text{dust}}$	1.021	$1.02^{+0.36}_{-0.35}$	$D_{1420}$	813.7	$814^{+10}_{-10}$ (-0.0 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.78	$31^{+4}_{-4}$ (-0.4 $\sigma$ )
$A_{217}^{\text{dust}}$	1.216	$1.22^{+0.22}_{-0.22}$	$n_{s,0.002}$	0.9632	$0.962^{+0.014}_{-0.014}$ (+0.4 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10493.96	$10494.8 (\nu: 3.2)$ (-0.1 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.953	$0.98^{+0.35}_{-0.35}$	$Y_{\text{P}}$	0.244938	$0.24498^{+0.00021}_{-0.00021}$ (-3.7 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	8046.0	$8062.0 (\nu: 19.2)$
$c_{100}$	0.99674	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	Age/Gyr	13.813	$13.805^{+0.076}_{-0.079}$ (-0.1 $\sigma$ )	$\chi_{\text{prior}}^2$	3.4	$8.4 (\nu: 6.0)$ (+0.3 $\sigma$ )
$c_{217}$	0.99739	$0.9972^{+0.0035}_{-0.0035}$ (+0.9 $\sigma$ )	$z_*$	1090.01	$1089.88^{+0.88}_{-0.87}$ (-0.1 $\sigma$ )	$\chi_{\text{CMB}}^2$	18539.9	$18556.8 (\nu: 18.2)$ (+1268.4 $\sigma$ )

Best-fit  $\chi_{\text{eff}}^2 = 18543.36$ ;  $\Delta\chi_{\text{eff}}^2 = 7282.64$ ;  $\bar{\chi}_{\text{eff}}^2 = 18565.16$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7283.16$ ;  $R - 1 = 0.00614$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10493.96 ( $\Delta$  -0.56) CamSpec like\_v9.10CMH\_unified: 8045.95

## 6.16 base\_alpha1\_CamSpecHM\_TT\_lowTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00045}_{-0.00047} \quad (-0.0\sigma)$	$\Omega_\Lambda$	$0.690^{+0.015}_{-0.015} \quad (+0.1\sigma)$	$k_D$	$0.14077^{+0.00097}_{-0.0010} \quad (-0.0\sigma)$
$\Omega_c h^2$	$0.1190^{+0.0025}_{-0.0025} \quad (-0.1\sigma)$	$\Omega_m$	$0.310^{+0.015}_{-0.015} \quad (-0.1\sigma)$	$100\theta_D$	$0.16064^{+0.00065}_{-0.00065} \quad (+0.0\sigma)$
$100\theta_{MC}$	$1.04075^{+0.00089}_{-0.00088} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1421^{+0.0024}_{-0.0024} \quad (-0.1\sigma)$	$z_{eq}$	$3381^{+57}_{-58} \quad (-0.1\sigma)$
$\tau$	$0.093^{+0.039}_{-0.040} \quad (+0.0\sigma)$	$\Omega_m h^3$	$0.09623^{+0.00093}_{-0.00094} \quad (+0.0\sigma)$	$100\theta_{eq}$	$0.817^{+0.011}_{-0.011} \quad (+0.1\sigma)$
$\alpha_{-1}$	$-0.0021^{+0.0034}_{-0.0046} \quad (+0.1\sigma)$	$\sigma_8$	$0.835^{+0.031}_{-0.031} \quad (+0.0\sigma)$	$r_{drag}/D_V(0.57)$	$0.07162^{+0.00086}_{-0.00083} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.119^{+0.080}_{-0.082} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.465^{+0.020}_{-0.021} \quad (-0.0\sigma)$	$H(0.57)$	$93.09^{+0.57}_{-0.54} \quad (+0.1\sigma)$
$n_s$	$0.965^{+0.011}_{-0.010} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.623^{+0.024}_{-0.025} \quad (-0.0\sigma)$	$D_A(0.57)$	$1386^{+15}_{-15} \quad (-0.1\sigma)$
$y_{cal}$	$1.0004^{+0.0050}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$1.015^{+0.037}_{-0.039} \quad (-0.0\sigma)$	$F_{AP}(0.57)$	$0.6757^{+0.0038}_{-0.0038} \quad (-0.1\sigma)$
$A_{100}^{PS}$	$244^{+40}_{-40} \quad (-0.4\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.508^{+0.090}_{-0.095} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.485^{+0.018}_{-0.019} \quad (-0.0\sigma)$
$A_{143}^{PS}$	$38^{+20}_{-20} \quad (-0.6\sigma)$	$z_{re}$	$11.2^{+3.4}_{-3.5} \quad (+0.0\sigma)$	$\sigma_8(0.57)$	$0.622^{+0.023}_{-0.024} \quad (+0.0\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s$	$2.27^{+0.19}_{-0.18} \quad (-0.0\sigma)$	$Y_P^{BBN}$	$0.24634^{+0.00019}_{-0.00021} \quad (-4.0\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.024}_{-0.024} \quad (-0.4\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-6} \quad (-0.4\sigma)$
$A_{143}^{tSZ}$	$< 6.63 \quad (-1.0\sigma)$	$D_{40}$	$1207^{+39}_{-37} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$105.9^{+4.0}_{-4.0} \quad (+0.2\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.23}_{-0.22}$	$D_{220}$	$5708^{+83}_{-79} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.4\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{810}$	$2532^{+28}_{-27} \quad (-0.3\sigma)$	$\chi_{lowTEB}^2$	$10495.1 \quad (\nu: 3.5) \quad (-0.1\sigma)$
$A^{kSZ}$	—	$D_{1420}$	$815^{+10}_{-9.7} \quad (-0.0\sigma)$	$\chi_{CamSpec}^2$	$8061.2 \quad (\nu: 18.8)$
$A_{100}^{dust}$	$0.99^{+0.37}_{-0.38}$	$n_{s,0.002}$	$0.965^{+0.011}_{-0.010} \quad (+0.4\sigma)$	$\chi_{6DF}^2$	$0.067 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$Y_P$	$0.24501^{+0.00019}_{-0.00020} \quad (-4.1\sigma)$	$\chi_{MGS}^2$	$1.31 \quad (\nu: 0.1) \quad (+0.1\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$Age/Gyr$	$13.790^{+0.058}_{-0.059} \quad (-0.0\sigma)$	$\chi_{DR11CMass}^2$	$2.96 \quad (\nu: 0.3) \quad (-0.1\sigma)$
$A_{143 \times 217}^{dust}$	$0.97^{+0.35}_{-0.35}$	$z_*$	$1089.72^{+0.67}_{-0.65} \quad (-0.0\sigma)$	$\chi_{DR11LOWZ}^2$	$0.80 \quad (\nu: 0.2) \quad (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$r_*$	$144.62^{+0.68}_{-0.64} \quad (+0.1\sigma)$	$\chi_{prior}^2$	$8.4 \quad (\nu: 6.0) \quad (+0.3\sigma)$
$c_{217}$	$0.9972^{+0.0035}_{-0.0034} \quad (+0.9\sigma)$	$100\theta_*$	$1.04093^{+0.00089}_{-0.00088} \quad (+0.1\sigma)$	$\chi_{CMB}^2$	$18556.3 \quad (\nu: 17.4) \quad (+757.7\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{drag}$	$1060.0^{+1.0}_{-1.1} \quad (-0.1\sigma)$	$\chi_{BAO}^2$	$5.1 \quad (\nu: 0.6) \quad (-0.0\sigma)$
$H_0$	$67.7^{+1.1}_{-1.1} \quad (+0.1\sigma)$	$r_{drag}$	$147.26^{+0.75}_{-0.71} \quad (+0.1\sigma)$		

$$\bar{\chi}_{eff}^2 = 18569.81; \Delta\bar{\chi}_{eff}^2 = 7282.86; R - 1 = 0.00960$$

## 6.17 base\_alpha1\_CamSpecHM\_TT\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02243^{+0.00049}_{-0.00050} \quad (-0.0\sigma)$	$H_0$	$67.5^{+1.8}_{-1.8} \quad (+0.1\sigma)$	$z_{\text{drag}}$	$1060.0^{+1.0}_{-1.1} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1196^{+0.0041}_{-0.0041} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.686^{+0.025}_{-0.026} \quad (+0.1\sigma)$	$r_{\text{drag}}$	$147.2^{+1.0}_{-0.98} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.0407^{+0.0010}_{-0.0010} \quad (+0.1\sigma)$	$\Omega_m$	$0.314^{+0.026}_{-0.025} \quad (-0.1\sigma)$	$k_D$	$0.1409^{+0.0011}_{-0.0012} \quad (-0.1\sigma)$
$\tau$	$0.091^{+0.041}_{-0.041} \quad (+0.0\sigma)$	$\Omega_m h^2$	$0.1426^{+0.0040}_{-0.0039} \quad (-0.1\sigma)$	$100\theta_D$	$0.16064^{+0.00064}_{-0.00065} \quad (+0.0\sigma)$
$\alpha_{-1}$	$-0.0022^{+0.0034}_{-0.0046} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.09622^{+0.00093}_{-0.00095} \quad (-0.0\sigma)$	$z_{\text{eq}}$	$3393^{+95}_{-93} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.117^{+0.080}_{-0.082} \quad (-0.0\sigma)$	$\sigma_8$	$0.835^{+0.030}_{-0.031} \quad (-0.0\sigma)$	$100\theta_{\text{eq}}$	$0.815^{+0.018}_{-0.017} \quad (+0.1\sigma)$
$n_s$	$0.964^{+0.014}_{-0.013} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.468^{+0.026}_{-0.026} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0714^{+0.0014}_{-0.0014} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0004^{+0.0050}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.625^{+0.026}_{-0.027} \quad (-0.1\sigma)$	$H(0.57)$	$93.00^{+0.81}_{-0.77} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-50} \quad (-0.5\sigma)$	$\sigma_8/h^{0.5}$	$1.017^{+0.039}_{-0.041} \quad (-0.0\sigma)$	$D_A(0.57)$	$1389^{+25}_{-25} \quad (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$38^{+20}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.513^{+0.094}_{-0.10} \quad (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6765^{+0.0065}_{-0.0063} \quad (-0.1\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$11.0^{+3.5}_{-3.6} \quad (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.486^{+0.019}_{-0.020} \quad (-0.0\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s$	$2.26^{+0.19}_{-0.18} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.621^{+0.024}_{-0.024} \quad (+0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.64 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.028}_{-0.028} \quad (-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24633^{+0.00021}_{-0.00022} \quad (-3.8\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.22}$	$D_{40}$	$1208^{+39}_{-38} \quad (-0.4\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-6} \quad (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5707^{+83}_{-80} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.0^{+4.0}_{-4.1} \quad (+0.2\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2533^{+28}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$D_{1420}$	$814^{+10}_{-9.8} \quad (-0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.0 \quad (\nu: 3.4) \quad (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$n_{\text{s},0.002}$	$0.964^{+0.014}_{-0.013} \quad (+0.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.8 \quad (\nu: 19.1)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.24500^{+0.00021}_{-0.00021} \quad (-3.8\sigma)$	$\chi_{\text{JLA}}^2$	$706.94 \quad (\nu: 0.1) \quad (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$\text{Age}/\text{Gyr}$	$13.797^{+0.074}_{-0.075} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.3 \quad (\nu: 6.0) \quad (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$z_*$	$1089.80^{+0.84}_{-0.82} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18556.7 \quad (\nu: 17.9) \quad (+581.2\sigma)$
$c_{217}$	$0.9972^{+0.0035}_{-0.0034} \quad (+0.9\sigma)$	$r_*$	$144.51^{+0.97}_{-0.96} \quad (+0.1\sigma)$		
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	$1.0409^{+0.0010}_{-0.0010} \quad (+0.2\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 19272.00; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.76; R - 1 = 0.00744$$

## 6.18 base\_alpha1\_CamSpecHM\_TT\_lowTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00050}_{-0.00052} \quad (+0.0\sigma)$	$H_0$	$67.8^{+1.9}_{-1.9} \quad (+0.1\sigma)$	$z_{\text{drag}}$	$1059.9^{+1.1}_{-1.1} \quad (-0.0\sigma)$
$\Omega_c h^2$	$0.1187^{+0.0042}_{-0.0040} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.691^{+0.024}_{-0.026} \quad (+0.1\sigma)$	$r_{\text{drag}}$	$147.42^{+0.95}_{-0.92} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.0408^{+0.0010}_{-0.0010} \quad (+0.1\sigma)$	$\Omega_m$	$0.309^{+0.026}_{-0.024} \quad (-0.1\sigma)$	$k_D$	$0.1406^{+0.0010}_{-0.0012} \quad (-0.0\sigma)$
$\tau$	$0.074^{+0.035}_{-0.034} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1417^{+0.0039}_{-0.0038} \quad (-0.1\sigma)$	$100\theta_D$	$0.16074^{+0.00065}_{-0.00066} \quad (-0.0\sigma)$
$\alpha_{-1}$	$-0.0017^{+0.0033}_{-0.0043} \quad (+0.0\sigma)$	$\Omega_m h^3$	$0.09608^{+0.00092}_{-0.00095} \quad (-0.0\sigma)$	$z_{\text{eq}}$	$3372^{+93}_{-90} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.079^{+0.066}_{-0.064} \quad (+0.1\sigma)$	$\sigma_8$	$0.818^{+0.020}_{-0.019} \quad (+0.1\sigma)$	$100\theta_{\text{eq}}$	$0.819^{+0.018}_{-0.018} \quad (+0.1\sigma)$
$n_s$	$0.966^{+0.014}_{-0.014} \quad (+0.3\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.018}_{-0.017} \quad (-0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0717^{+0.0014}_{-0.0014} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0051}_{-0.0049} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.015}_{-0.016} \quad (+0.1\sigma)$	$H(0.57)$	$93.10^{+0.84}_{-0.82} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$248^{+50}_{-50} \quad (-0.5\sigma)$	$\sigma_8/h^{0.5}$	$0.994^{+0.022}_{-0.023} \quad (+0.1\sigma)$	$D_A(0.57)$	$1385^{+25}_{-25} \quad (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$39^{+20}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.457^{+0.054}_{-0.055} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6753^{+0.0065}_{-0.0062} \quad (-0.1\sigma)$
$A_{217}^{\text{PS}}$	$96^{+30}_{-20} \quad (+0.0\sigma)$	$z_{\text{re}}$	$9.5^{+3.2}_{-3.2} \quad (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.475^{+0.011}_{-0.011} \quad (+0.1\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.18^{+0.15}_{-0.14} \quad (+0.1\sigma)$	$\sigma_8(0.57)$	$0.609^{+0.018}_{-0.017} \quad (+0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.44 \quad (-0.9\sigma)$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.027}_{-0.028} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24631^{+0.00021}_{-0.00023} \quad (-3.6\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.50^{+0.23}_{-0.21}$	$D_{40}$	$1201^{+42}_{-37} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5704^{+86}_{-83} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.5^{+4.0}_{-4.0} \quad (+0.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2530^{+27}_{-26} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.999^{+0.37}_{-0.37}$	$D_{1420}$	$814^{+10}_{-10} \quad (-0.0\sigma)$	$\chi_{\text{lensing}}^2$	$10.0 \quad (\nu: 1.3) \quad (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.966^{+0.014}_{-0.014} \quad (+0.3\sigma)$	$\chi_{\text{lowTEB}}^2$	$10493.6 \quad (\nu: 1.9) \quad (-0.1\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.24498^{+0.00023}_{-0.00021} \quad (-3.6\sigma)$	$\chi_{\text{CamSpec}}^2$	$8063.8 \quad (\nu: 18.7)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.36}$	$\text{Age}/\text{Gyr}$	$13.793^{+0.077}_{-0.078} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.3 \quad (\nu: 5.9) \quad (+0.2\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$z_*$	$1089.77^{+0.88}_{-0.86} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18567.4 \quad (\nu: 18.7) \quad (+1216.7\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0034} \quad (+1.0\sigma)$	$r_*$	$144.75^{+0.94}_{-0.92} \quad (+0.1\sigma)$		
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	$1.04100^{+0.00098}_{-0.0010} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18575.74; \Delta\chi_{\text{eff}}^2 = 7282.28; R - 1 = 0.01864$$

## 6.19 base\_alpha1\_CamSpecHM\_TT\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02244^{+0.00049}_{-0.00050}$ (+0.0 $\sigma$ )	$H_0$	$67.5^{+1.9}_{-1.9}$ (+0.1 $\sigma$ )	$z_{\text{drag}}$	$1060.0^{+1.0}_{-1.1}$ (-0.1 $\sigma$ )
$\Omega_c h^2$	$0.1195^{+0.0043}_{-0.0042}$ (-0.1 $\sigma$ )	$\Omega_\Lambda$	$0.687^{+0.025}_{-0.027}$ (+0.1 $\sigma$ )	$r_{\text{drag}}$	$147.2^{+1.0}_{-1.0}$ (+0.1 $\sigma$ )
$100\theta_{\text{MC}}$	$1.0407^{+0.0010}_{-0.0010}$ (+0.1 $\sigma$ )	$\Omega_m$	$0.313^{+0.027}_{-0.025}$ (-0.1 $\sigma$ )	$k_D$	$0.1409^{+0.0011}_{-0.0012}$ (-0.1 $\sigma$ )
$\tau$	$0.092^{+0.041}_{-0.042}$ (+0.0 $\sigma$ )	$\Omega_m h^2$	$0.1426^{+0.0041}_{-0.0040}$ (-0.1 $\sigma$ )	$100\theta_D$	$0.16063^{+0.00064}_{-0.00064}$ (-0.0 $\sigma$ )
$\alpha_{-1}$	$-0.0023^{+0.0034}_{-0.0046}$ (+0.1 $\sigma$ )	$\Omega_m h^3$	$0.09624^{+0.00092}_{-0.00095}$ (-0.0 $\sigma$ )	$z_{\text{eq}}$	$3391^{+99}_{-96}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	$3.118^{+0.081}_{-0.082}$ (-0.0 $\sigma$ )	$\sigma_8$	$0.835^{+0.030}_{-0.031}$ (-0.0 $\sigma$ )	$100\theta_{\text{eq}}$	$0.815^{+0.018}_{-0.018}$ (+0.1 $\sigma$ )
$n_s$	$0.964^{+0.014}_{-0.014}$ (+0.4 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	$0.467^{+0.027}_{-0.027}$ (-0.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	$0.0715^{+0.0015}_{-0.0014}$ (+0.1 $\sigma$ )
$y_{\text{cal}}$	$1.0004^{+0.0050}_{-0.0049}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	$0.625^{+0.026}_{-0.027}$ (-0.1 $\sigma$ )	$H(0.57)$	$93.02^{+0.83}_{-0.79}$ (+0.1 $\sigma$ )
$A_{100}^{\text{PS}}$	$244^{+40}_{-50}$ (-0.5 $\sigma$ )	$\sigma_8/h^{0.5}$	$1.017^{+0.039}_{-0.042}$ (-0.1 $\sigma$ )	$D_A(0.57)$	$1388^{+25}_{-25}$ (-0.1 $\sigma$ )
$A_{143}^{\text{PS}}$	$38^{+20}_{-20}$ (-0.6 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	$2.512^{+0.095}_{-0.10}$ (-0.2 $\sigma$ )	$F_{\text{AP}}(0.57)$	$0.6764^{+0.0068}_{-0.0064}$ (-0.1 $\sigma$ )
$A_{217}^{\text{PS}}$	$98^{+30}_{-30}$ (+0.1 $\sigma$ )	$z_{\text{re}}$	$11.1^{+3.5}_{-3.6}$ (+0.0 $\sigma$ )	$f\sigma_8(0.57)$	$0.486^{+0.019}_{-0.020}$ (-0.1 $\sigma$ )
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10}$ (-2.7 $\sigma$ )	$10^9 A_s$	$2.26^{+0.19}_{-0.18}$ (-0.0 $\sigma$ )	$\sigma_8(0.57)$	$0.621^{+0.024}_{-0.024}$ (+0.0 $\sigma$ )
$A_{143}^{\text{tSZ}}$	$< 6.66$ (-1.0 $\sigma$ )	$10^9 A_s e^{-2\tau}$	$1.880^{+0.029}_{-0.028}$ (-0.4 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	$0.24633^{+0.00021}_{-0.00022}$ (-3.7 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.22}$	$D_{40}$	$1208^{+39}_{-38}$ (-0.4 $\sigma$ )	$f_{2000}^{143}$	$28^{+6}_{-6}$ (-0.4 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5708^{+83}_{-80}$ (-0.5 $\sigma$ )	$f_{2000}^{217}$	$105.9^{+4.0}_{-4.1}$ (+0.2 $\sigma$ )
$A^{\text{kSZ}}$	—	$D_{810}$	$2533^{+28}_{-27}$ (-0.3 $\sigma$ )	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4}$ (-0.4 $\sigma$ )
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$D_{1420}$	$814^{+10}_{-9.9}$ (-0.0 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	$10495.0 (\nu: 3.4)$ (-0.1 $\sigma$ )
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$n_{\text{s},0.002}$	$0.964^{+0.014}_{-0.014}$ (+0.4 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	$8061.8 (\nu: 19.2)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.24500^{+0.00021}_{-0.00021}$ (-3.7 $\sigma$ )	$\chi_{\text{H070p6}}^2$	$0.93 (\nu: 0.1)$ (-0.1 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$\text{Age}/\text{Gyr}$	$13.795^{+0.075}_{-0.077}$ (-0.1 $\sigma$ )	$\chi_{\text{prior}}^2$	$8.3 (\nu: 6.1)$ (+0.3 $\sigma$ )
$c_{100}$	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	$z_*$	$1089.78^{+0.85}_{-0.83}$ (-0.1 $\sigma$ )	$\chi_{\text{CMB}}^2$	$18556.8 (\nu: 18.0)$ (+877.1 $\sigma$ )
$c_{217}$	$0.9972^{+0.0035}_{-0.0034}$ (+0.9 $\sigma$ )	$r_*$	$144.5^{+1.0}_{-1.0}$ (+0.1 $\sigma$ )		
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	$1.0409^{+0.0010}_{-0.0010}$ (+0.2 $\sigma$ )		

$$\bar{\chi}_{\text{eff}}^2 = 18566.09; \Delta\bar{\chi}_{\text{eff}}^2 = 7283.02; R - 1 = 0.00757$$



## 6.20 base\_alpha1\_CamSpecHM\_TT\_lowTEB\_post\_lensing\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02242^{+0.00048}_{-0.00046} (+0.0\sigma)$	$\Omega_m$	$0.306^{+0.014}_{-0.014} (-0.1\sigma)$	$z_{\text{eq}}$	$3364^{+54}_{-54} (-0.1\sigma)$
$\Omega_c h^2$	$0.1184^{+0.0024}_{-0.0023} (-0.0\sigma)$	$\Omega_m h^2$	$0.1414^{+0.0023}_{-0.0023} (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.820^{+0.010}_{-0.010} (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04087^{+0.00089}_{-0.00084} (+0.1\sigma)$	$\Omega_m h^3$	$0.09611^{+0.00091}_{-0.00095} (+0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07185^{+0.00080}_{-0.00078} (+0.1\sigma)$
$\tau$	$0.076^{+0.028}_{-0.029} (+0.1\sigma)$	$\sigma_8$	$0.819^{+0.019}_{-0.019} (+0.1\sigma)$	$H(0.57)$	$93.16^{+0.55}_{-0.53} (+0.1\sigma)$
$\alpha_{-1}$	$-0.0017^{+0.0032}_{-0.0042} (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.013}_{-0.013} (+0.1\sigma)$	$D_A(0.57)$	$1383^{+14}_{-15} (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.083^{+0.054}_{-0.055} (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.014}_{-0.014} (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6747^{+0.0036}_{-0.0035} (-0.1\sigma)$
$n_s$	$0.966^{+0.011}_{-0.010} (+0.4\sigma)$	$\sigma_8/h^{0.5}$	$0.993^{+0.022}_{-0.022} (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.475^{+0.011}_{-0.011} (+0.1\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0051}_{-0.0049} (-0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.456^{+0.053}_{-0.053} (-0.1\sigma)$	$\sigma_8(0.57)$	$0.610^{+0.015}_{-0.015} (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-50} (-0.5\sigma)$	$z_{\text{re}}$	$9.7^{+2.6}_{-2.6} (+0.1\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24632^{+0.00020}_{-0.00020} (-4.1\sigma)$
$A_{143}^{\text{PS}}$	$39^{+10}_{-20} (-0.6\sigma)$	$10^9 A_s$	$2.18^{+0.12}_{-0.12} (+0.1\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} (-0.4\sigma)$
$A_{217}^{\text{PS}}$	$96^{+30}_{-30} (+0.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.023}_{-0.023} (-0.3\sigma)$	$f_{2000}^{217}$	$106.4^{+3.9}_{-3.8} (+0.1\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} (-2.8\sigma)$	$D_{40}$	$1201^{+43}_{-37} (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.41 (-0.9\sigma)$	$D_{220}$	$5706^{+83}_{-87} (-0.5\sigma)$	$\chi^2_{\text{lensing}}$	$9.9 (\nu: 1.2) (-0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.50^{+0.23}_{-0.22}$	$D_{810}$	$2530^{+27}_{-27} (-0.2\sigma)$	$\chi^2_{\text{lowTEB}}$	$10493.5 (\nu: 1.7) (-0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{1420}$	$814.4^{+9.6}_{-9.7} (-0.0\sigma)$	$\chi^2_{\text{CamSpec}}$	$8063.5 (\nu: 18.3)$
$A^{\text{kSZ}}$	—	$n_{\text{s},0.002}$	$0.966^{+0.011}_{-0.010} (+0.4\sigma)$	$\chi^2_{\text{H070p6}}$	$0.66 (\nu: 0.0) (-0.1\sigma)$
$A_{100}^{\text{dust}}$	$0.999^{+0.36}_{-0.37}$	$Y_{\text{P}}$	$0.24500^{+0.00021}_{-0.00019} (-4.1\sigma)$	$\chi^2_{\text{JLA}}$	$706.66 (\nu: 0.0) (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.35}$	$\text{Age/Gyr}$	$13.787^{+0.057}_{-0.058} (-0.0\sigma)$	$\chi^2_{6\text{DF}}$	$0.040 (\nu: 0.0) (-0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$z_*$	$1089.70^{+0.68}_{-0.63} (-0.1\sigma)$	$\chi^2_{\text{MGS}}$	$1.61 (\nu: 0.2) (+0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$r_*$	$144.82^{+0.64}_{-0.61} (+0.1\sigma)$	$\chi^2_{\text{DR11CMass}}$	$2.84 (\nu: 0.2) (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	$100\theta_*$	$1.04106^{+0.00089}_{-0.00083} (+0.1\sigma)$	$\chi^2_{\text{DR11LOWZ}}$	$0.50 (\nu: 0.1) (-0.1\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0034} (+0.9\sigma)$	$z_{\text{drag}}$	$1059.9^{+1.0}_{-1.1} (-0.0\sigma)$	$\chi^2_{\text{prior}}$	$8.3 (\nu: 5.8) (+0.2\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_{\text{drag}}$	$147.47^{+0.74}_{-0.69} (+0.0\sigma)$	$\chi^2_{\text{CMB}}$	$18566.8 (\nu: 17.7) (+327.7\sigma)$
$H_0$	$68.0^{+1.1}_{-1.1} (+0.1\sigma)$	$k_{\text{D}}$	$0.14052^{+0.00093}_{-0.00099} (-0.0\sigma)$	$\chi^2_{\text{BAO}}$	$4.98 (\nu: 0.4) (+0.0\sigma)$
$\Omega_\Lambda$	$0.694^{+0.014}_{-0.014} (+0.1\sigma)$	$100\theta_{\text{D}}$	$0.16072^{+0.00064}_{-0.00065} (-0.0\sigma)$		

$$\bar{\chi}^2_{\text{eff}} = 19287.47; \Delta\bar{\chi}^2_{\text{eff}} = 7281.40; R - 1 = 0.02463$$

## 6.21 base\_alpha1\_CamSpecHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00050}_{-0.00049} \quad (+0.0\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_*$	$144.4^{+1.0}_{-1.0} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1200^{+0.0045}_{-0.0044} \quad (-0.1\sigma)$	$H_0$	$67.3^{+2.0}_{-1.9} \quad (+0.1\sigma)$	$100\theta_*$	$1.0408^{+0.0010}_{-0.0010} \quad (+0.2\sigma)$
$100\theta_{MC}$	$1.0406^{+0.0010}_{-0.0010} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.683^{+0.027}_{-0.028} \quad (+0.1\sigma)$	$z_{drag}$	$1060.0^{+1.0}_{-1.0} \quad (-0.0\sigma)$
$\tau$	$0.090^{+0.039}_{-0.041} \quad (+0.1\sigma)$	$\Omega_m$	$0.317^{+0.028}_{-0.027} \quad (-0.1\sigma)$	$r_{drag}$	$147.1^{+1.0}_{-1.0} \quad (+0.1\sigma)$
$\alpha_{-1}$	$-0.0023^{+0.0034}_{-0.0046} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1431^{+0.0043}_{-0.0042} \quad (-0.1\sigma)$	$k_D$	$0.1409^{+0.0011}_{-0.0012} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.116^{+0.079}_{-0.076} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.09622^{+0.00092}_{-0.00094} \quad (-0.0\sigma)$	$100\theta_D$	$0.16066^{+0.00065}_{-0.00060} \quad (-0.0\sigma)$
$n_s$	$0.962^{+0.014}_{-0.014} \quad (+0.4\sigma)$	$\sigma_8$	$0.836^{+0.030}_{-0.029} \quad (-0.0\sigma)$	$z_{eq}$	$3404^{+100}_{-100} \quad (-0.1\sigma)$
$y_{cal}$	$1.0003^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.470^{+0.027}_{-0.028} \quad (-0.1\sigma)$	$100\theta_{eq}$	$0.813^{+0.019}_{-0.019} \quad (+0.1\sigma)$
$A_{100}^{PS}$	$245^{+40}_{-50} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.627^{+0.027}_{-0.027} \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.0713^{+0.0015}_{-0.0015} \quad (+0.1\sigma)$
$A_{143}^{PS}$	$38^{+20}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.019^{+0.039}_{-0.040} \quad (-0.1\sigma)$	$H(0.57)$	$92.92^{+0.86}_{-0.81} \quad (+0.1\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.518^{+0.094}_{-0.097} \quad (-0.2\sigma)$	$D_A(0.57)$	$1392^{+26}_{-26} \quad (-0.1\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$z_{re}$	$10.9^{+3.2}_{-3.5} \quad (+0.1\sigma)$	$F_{AP}(0.57)$	$0.6773^{+0.0070}_{-0.0068} \quad (-0.1\sigma)$
$A_{143}^{tSZ}$	$< 6.64 \quad (-1.0\sigma)$	$10^9 A_s$	$2.26^{+0.18}_{-0.18} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.487^{+0.019}_{-0.019} \quad (-0.1\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.23}_{-0.21}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.029}_{-0.029} \quad (-0.4\sigma)$	$\sigma_8(0.57)$	$0.621^{+0.023}_{-0.022} \quad (+0.0\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{40}$	$1209^{+39}_{-38} \quad (-0.4\sigma)$	$Y_P^{BBN}$	$0.24631^{+0.00021}_{-0.00022} \quad (-3.7\sigma)$
$A^{kSZ}$	—	$D_{220}$	$5705^{+82}_{-80} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-6} \quad (-0.4\sigma)$
$A_{100}^{dust}$	$0.99^{+0.37}_{-0.38}$	$D_{810}$	$2533^{+28}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$106.1^{+4.0}_{-4.0} \quad (+0.1\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	$814^{+10}_{-9.9} \quad (-0.0\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.4\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.962^{+0.014}_{-0.014} \quad (+0.4\sigma)$	$\chi_{lowTEB}^2$	$10494.8 \quad (\nu: 3.2) \quad (-0.1\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$Y_P$	$0.24499^{+0.00021}_{-0.00021} \quad (-3.7\sigma)$	$\chi_{CamSpec}^2$	$8061.9 \quad (\nu: 19.2)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	Age/Gyr	$13.804^{+0.076}_{-0.079} \quad (-0.1\sigma)$	$\chi_{prior}^2$	$8.3 \quad (\nu: 6.1) \quad (+0.3\sigma)$
$c_{217}$	$0.9972^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$z_*$	$1089.88^{+0.88}_{-0.86} \quad (-0.1\sigma)$	$\chi_{CMB}^2$	$18556.7 \quad (\nu: 17.8) \quad (+923.0\sigma)$

$$\bar{\chi}_{eff}^2 = 18565.09; \Delta\bar{\chi}_{eff}^2 = 7283.13; R - 1 = 0.00710$$

## 6.22 base\_alpha1\_CamSpecHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022342	$0.02234^{+0.00032}_{-0.00032}$ (+0.6 $\sigma$ )	$\mathcal{C}_{EE}$	1.0012	$1.0019^{+0.0087}_{-0.0087}$	$r_*$	144.78	$144.90^{+0.82}_{-0.94}$ (+0.4 $\sigma$ )
$\Omega_c h^2$	0.11872	$0.1183^{+0.0038}_{-0.0034}$ (-0.5 $\sigma$ )	$\beta_1^1$	-0.13	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	1.04115	$1.04127^{+0.00081}_{-0.00092}$ (+0.2 $\sigma$ )
$100\theta_{MC}$	1.04095	$1.04107^{+0.00082}_{-0.00092}$ (+0.2 $\sigma$ )	$H_0$	67.79	$68.0^{+1.6}_{-1.6}$ (+0.5 $\sigma$ )	$z_{drag}$	1059.78	$1059.74^{+0.70}_{-0.67}$ (+0.4 $\sigma$ )
$\tau$	0.0779	$0.078^{+0.034}_{-0.034}$ (-0.1 $\sigma$ )	$\Omega_\Lambda$	0.6916	$0.694^{+0.022}_{-0.023}$ (+0.5 $\sigma$ )	$r_{drag}$	147.46	$147.58^{+0.83}_{-0.96}$ (+0.3 $\sigma$ )
$\alpha_{-1}$	0.00005	$0.0004^{+0.0016}_{-0.0011}$ (+0.2 $\sigma$ )	$\Omega_m$	0.3084	$0.306^{+0.023}_{-0.022}$ (-0.5 $\sigma$ )	$k_D$	0.14047	$0.1403^{+0.0010}_{-0.00092}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.085	$3.084^{+0.065}_{-0.067}$ (-0.2 $\sigma$ )	$\Omega_m h^2$	0.14171	$0.1413^{+0.0037}_{-0.0033}$ (-0.5 $\sigma$ )	$100\theta_D$	0.160825	$0.16086^{+0.00044}_{-0.00045}$ (-0.5 $\sigma$ )
$n_s$	0.9694	$0.972^{+0.013}_{-0.014}$ (+0.6 $\sigma$ )	$\Omega_m h^3$	0.09607	$0.09604^{+0.00061}_{-0.00060}$ (+0.2 $\sigma$ )	$z_{eq}$	3371	$3361^{+89}_{-78}$ (-0.5 $\sigma$ )
$y_{cal}$	1.00001	$1.0004^{+0.0049}_{-0.0049}$ (-0.0 $\sigma$ )	$\sigma_8$	0.8255	$0.825^{+0.026}_{-0.026}$ (-0.4 $\sigma$ )	$100\theta_{eq}$	0.8189	$0.821^{+0.015}_{-0.017}$ (+0.5 $\sigma$ )
$A_{100}^{PS}$	246.3	$243^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4584	$0.456^{+0.023}_{-0.021}$ (-0.6 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07175	$0.0719^{+0.0012}_{-0.0013}$ (+0.5 $\sigma$ )
$A_{143}^{PS}$	35.1	$38^{+10}_{-10}$ (-0.7 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6152	$0.614^{+0.023}_{-0.022}$ (-0.6 $\sigma$ )	$H(0.57)$	93.08	$93.17^{+0.64}_{-0.66}$ (+0.6 $\sigma$ )
$A_{217}^{PS}$	97.9	$99^{+30}_{-30}$ (+0.1 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0027	$1.001^{+0.034}_{-0.034}$ (-0.5 $\sigma$ )	$D_A(0.57)$	1385.2	$1383^{+22}_{-20}$ (-0.6 $\sigma$ )
$A_{217}^{CIB}$	46.5	$45^{+10}_{-10}$ (-2.8 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.476	$2.470^{+0.085}_{-0.082}$ (-0.6 $\sigma$ )	$F_{AP}(0.57)$	0.6752	$0.6746^{+0.0058}_{-0.0055}$ (-0.5 $\sigma$ )
$A_{143}^{tSZ}$	3.54	< 6.90 (-1.0 $\sigma$ )	$z_{re}$	9.93	$9.9^{+3.1}_{-3.1}$ (-0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4792	$0.478^{+0.017}_{-0.016}$ (-0.5 $\sigma$ )
$r_{143 \times 217}^{PS}$	0.430	$0.52^{+0.23}_{-0.21}$	$10^9 A_s$	2.186	$2.19^{+0.15}_{-0.14}$ (-0.2 $\sigma$ )	$\sigma_8(0.57)$	0.6149	$0.615^{+0.020}_{-0.020}$ (-0.2 $\sigma$ )
$\xi^{tSZ \times CIB}$	0.03	—	$10^9 A_s e^{-2\tau}$	1.8703	$1.869^{+0.028}_{-0.026}$ (-0.7 $\sigma$ )	$Y_P^{BBN}$	0.246291	$0.24629^{+0.00013}_{-0.00014}$ (-5.2 $\sigma$ )
$A^{kSZ}$	4.5	—	$D_{40}$	1231.3	$1234^{+28}_{-28}$ (-0.7 $\sigma$ )	$f_{2000}^{143}$	28.6	$28^{+5}_{-5}$ (-0.4 $\sigma$ )
$A_{100}^{dust}$	0.988	$0.98^{+0.38}_{-0.38}$	$D_{220}$	5707	$5710^{+77}_{-77}$ (-0.4 $\sigma$ )	$f_{2000}^{217}$	106.11	$105.9^{+3.7}_{-3.7}$ (+0.1 $\sigma$ )
$A_{143}^{dust}$	1.027	$1.02^{+0.36}_{-0.36}$	$D_{810}$	2527.8	$2530^{+27}_{-27}$ (-0.4 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.18	$31^{+4}_{-4}$ (-0.5 $\sigma$ )
$A_{217}^{dust}$	1.222	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	814.3	$815.5^{+9.6}_{-9.5}$ (+0.1 $\sigma$ )	$\chi_{lowTEB}^2$	10496.5	$10497.8 (\nu: 3.6)$ (-0.4 $\sigma$ )
$A_{143 \times 217}^{dust}$	0.969	$0.98^{+0.35}_{-0.34}$	$n_{s,0.002}$	0.9694	$0.972^{+0.013}_{-0.014}$ (+0.6 $\sigma$ )	$\chi_{CamSpec}^2$	12935.1	$12952.6 (\nu: 21.5)$
$c_{100}$	0.99670	$0.9968^{+0.0019}_{-0.0019}$ (-1.8 $\sigma$ )	$Y_P$	0.244959	$0.24496^{+0.00014}_{-0.00013}$ (-5.2 $\sigma$ )	$\chi_{prior}^2$	3.6	$9.1 (\nu: 6.4)$ (-1.9 $\sigma$ )
$c_{217}$	0.99713	$0.9970^{+0.0035}_{-0.0034}$ (+0.7 $\sigma$ )	Age/Gyr	13.794	$13.788^{+0.055}_{-0.054}$ (-0.6 $\sigma$ )	$\chi_{CMB}^2$	23431.6	$23450.4 (\nu: 19.9)$ (+1510.4 $\sigma$ )
$c_{TE}$	1.0043	$1.0046^{+0.0088}_{-0.0088}$	$z_*$	1089.83	$1089.79^{+0.59}_{-0.57}$ (-0.7 $\sigma$ )			

Best-fit  $\chi_{eff}^2 = 23435.22$ ;  $\Delta\chi_{eff}^2 = 10499.83$ ;  $\bar{\chi}_{eff}^2 = 23459.49$ ;  $\Delta\bar{\chi}_{eff}^2 = 10490.24$ ;  $R - 1 = 0.00861$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.44 ( $\Delta$  -1.35) CamSpec like.v9.10CMH\_unified: 12935.14

### 6.23 base\_alpha1\_CamSpecHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00031}_{-0.00031} \quad (+0.5\sigma)$	$H_0$	$67.9^{+1.0}_{-1.0} \quad (+0.4\sigma)$	$k_D$	$0.14037^{+0.00081}_{-0.00074} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1185^{+0.0023}_{-0.0022} \quad (-0.3\sigma)$	$\Omega_\Lambda$	$0.693^{+0.013}_{-0.014} \quad (+0.4\sigma)$	$100\theta_D$	$0.16087^{+0.00045}_{-0.00045} \quad (-0.5\sigma)$
$100\theta_{MC}$	$1.04105^{+0.00070}_{-0.00074} \quad (+0.0\sigma)$	$\Omega_m$	$0.307^{+0.014}_{-0.013} \quad (-0.4\sigma)$	$z_{eq}$	$3364^{+54}_{-52} \quad (-0.3\sigma)$
$\tau$	$0.077^{+0.033}_{-0.033} \quad (-0.2\sigma)$	$\Omega_m h^2$	$0.1414^{+0.0023}_{-0.0022} \quad (-0.3\sigma)$	$100\theta_{eq}$	$0.820^{+0.010}_{-0.010} \quad (+0.3\sigma)$
$\alpha_{-1}$	$0.00037^{+0.0014}_{-0.00093} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.09604^{+0.00061}_{-0.00059} \quad (+0.3\sigma)$	$r_{drag}/D_V(0.57)$	$0.07186^{+0.00080}_{-0.00080} \quad (+0.3\sigma)$
$\ln(10^{10} A_s)$	$3.083^{+0.065}_{-0.066} \quad (-0.3\sigma)$	$\sigma_8$	$0.825^{+0.027}_{-0.026} \quad (-0.4\sigma)$	$H(0.57)$	$93.13^{+0.45}_{-0.43} \quad (+0.5\sigma)$
$n_s$	$0.9712^{+0.0097}_{-0.011} \quad (+0.5\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.018}_{-0.018} \quad (-0.5\sigma)$	$D_A(0.57)$	$1384^{+13}_{-13} \quad (-0.4\sigma)$
$y_{cal}$	$1.0004^{+0.0049}_{-0.0050} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.614^{+0.021}_{-0.021} \quad (-0.5\sigma)$	$F_{AP}(0.57)$	$0.6748^{+0.0035}_{-0.0034} \quad (-0.4\sigma)$
$A_{100}^{PS}$	$243^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.002^{+0.033}_{-0.032} \quad (-0.4\sigma)$	$f\sigma_8(0.57)$	$0.479^{+0.016}_{-0.016} \quad (-0.4\sigma)$
$A_{143}^{PS}$	$38^{+10}_{-10} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.472^{+0.081}_{-0.078} \quad (-0.5\sigma)$	$\sigma_8(0.57)$	$0.615^{+0.020}_{-0.020} \quad (-0.3\sigma)$
$A_{217}^{PS}$	$99^{+20}_{-30} \quad (+0.1\sigma)$	$z_{re}$	$9.8^{+3.0}_{-3.1} \quad (-0.2\sigma)$	$Y_P^{BBN}$	$0.24629^{+0.00013}_{-0.00014} \quad (-5.5\sigma)$
$A_{217}^{CIB}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.18^{+0.15}_{-0.14} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.4\sigma)$
$A_{143}^{tSZ}$	$< 6.92 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.023}_{-0.023} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$105.9^{+3.6}_{-3.6} \quad (+0.1\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.21}$	$D_{40}$	$1235^{+28}_{-29} \quad (-0.7\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.5\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{220}$	$5709^{+76}_{-76} \quad (-0.4\sigma)$	$\chi_{lowTEB}^2$	$10497.8 \quad (\nu: 3.2) \quad (-0.5\sigma)$
$A^{kSZ}$	—	$D_{810}$	$2530^{+26}_{-27} \quad (-0.3\sigma)$	$\chi_{CamSpec}^2$	$12952.0 \quad (\nu: 20.3)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$D_{1420}$	$815.4^{+9.5}_{-9.4} \quad (+0.0\sigma)$	$\chi_{6DF}^2$	$0.039 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$n_{s,0.002}$	$0.9712^{+0.0097}_{-0.011} \quad (+0.5\sigma)$	$\chi_{MGS}^2$	$1.60 \quad (\nu: 0.1) \quad (+0.3\sigma)$
$A_{217}^{dust}$	$1.22^{+0.22}_{-0.23}$	$Y_P$	$0.24496^{+0.00014}_{-0.00013} \quad (-5.6\sigma)$	$\chi_{DR11CMass}^2$	$2.82 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.36}_{-0.35}$	$Age/Gyr$	$13.791^{+0.041}_{-0.041} \quad (-0.5\sigma)$	$\chi_{DR11LOWZ}^2$	$0.50 \quad (\nu: 0.1) \quad (-0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.82^{+0.47}_{-0.46} \quad (-0.6\sigma)$	$\chi_{prior}^2$	$9.1 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0034} \quad (+0.7\sigma)$	$r_*$	$144.86^{+0.57}_{-0.61} \quad (+0.1\sigma)$	$\chi_{CMB}^2$	$23449.7 \quad (\nu: 19.2) \quad (+1526.7\sigma)$
$c_{TE}$	$1.0046^{+0.0087}_{-0.0088}$	$100\theta_*$	$1.04125^{+0.00070}_{-0.00075} \quad (+0.0\sigma)$	$\chi_{BAO}^2$	$4.95 \quad (\nu: 0.4) \quad (+0.0\sigma)$
$c_{EE}$	$1.0018^{+0.0085}_{-0.0084}$	$z_{drag}$	$1059.72^{+0.72}_{-0.70} \quad (+0.4\sigma)$		
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_{drag}$	$147.55^{+0.60}_{-0.65} \quad (+0.1\sigma)$		

$$\bar{\chi}_{eff}^2 = 23463.76; \Delta\bar{\chi}_{eff}^2 = 10490.20; R - 1 = 0.00759$$

## 6.24 base\_alpha1\_CamSpecHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00031}_{-0.00032} \quad (+0.6\sigma)$	$c_{EE}$	$1.0019^{+0.0086}_{-0.0087}$	$r_*$	$144.94^{+0.78}_{-0.88} \quad (+0.3\sigma)$
$\Omega_c h^2$	$0.1181^{+0.0035}_{-0.0034} \quad (-0.5\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.04130^{+0.00079}_{-0.00089} \quad (+0.2\sigma)$
$100\theta_{MC}$	$1.04110^{+0.00085}_{-0.00088} \quad (+0.2\sigma)$	$H_0$	$68.1^{+1.4}_{-1.5} \quad (+0.5\sigma)$	$z_{drag}$	$1059.74^{+0.70}_{-0.67} \quad (+0.4\sigma)$
$\tau$	$0.079^{+0.033}_{-0.034} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.695^{+0.020}_{-0.021} \quad (+0.5\sigma)$	$r_{drag}$	$147.62^{+0.80}_{-0.90} \quad (+0.3\sigma)$
$\alpha_{-1}$	$0.0005^{+0.0016}_{-0.0011} \quad (+0.1\sigma)$	$\Omega_m$	$0.305^{+0.021}_{-0.020} \quad (-0.5\sigma)$	$k_D$	$0.1403^{+0.0010}_{-0.00089} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.085^{+0.065}_{-0.067} \quad (-0.2\sigma)$	$\Omega_m h^2$	$0.1411^{+0.0035}_{-0.0031} \quad (-0.4\sigma)$	$100\theta_D$	$0.16086^{+0.00044}_{-0.00044} \quad (-0.5\sigma)$
$n_s$	$0.972^{+0.012}_{-0.014} \quad (+0.6\sigma)$	$\Omega_m h^3$	$0.09604^{+0.00061}_{-0.00059} \quad (+0.2\sigma)$	$z_{eq}$	$3356^{+83}_{-75} \quad (-0.4\sigma)$
$y_{cal}$	$1.0004^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8$	$0.825^{+0.026}_{-0.026} \quad (-0.4\sigma)$	$100\theta_{eq}$	$0.822^{+0.014}_{-0.016} \quad (+0.5\sigma)$
$A_{100}^{PS}$	$243^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.022}_{-0.021} \quad (-0.6\sigma)$	$r_{drag}/D_V(0.57)$	$0.0720^{+0.0012}_{-0.0012} \quad (+0.5\sigma)$
$A_{143}^{PS}$	$38^{+10}_{-10} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.613^{+0.023}_{-0.022} \quad (-0.6\sigma)$	$H(0.57)$	$93.20^{+0.62}_{-0.62} \quad (+0.6\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.000^{+0.034}_{-0.034} \quad (-0.5\sigma)$	$D_A(0.57)$	$1381^{+20}_{-20} \quad (-0.5\sigma)$
$A_{217}^{CIB}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.469^{+0.085}_{-0.081} \quad (-0.6\sigma)$	$F_{AP}(0.57)$	$0.6743^{+0.0054}_{-0.0053} \quad (-0.5\sigma)$
$A_{143}^{tSZ}$	$< 6.95 \quad (-1.0\sigma)$	$z_{re}$	$9.9^{+3.0}_{-3.1} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.478^{+0.017}_{-0.016} \quad (-0.5\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.21}$	$10^9 A_s$	$2.19^{+0.14}_{-0.14} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.616^{+0.020}_{-0.020} \quad (-0.2\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.868^{+0.027}_{-0.026} \quad (-0.6\sigma)$	$Y_P^{BBN}$	$0.24629^{+0.00013}_{-0.00014} \quad (-5.2\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1234^{+28}_{-28} \quad (-0.7\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.4\sigma)$
$A_{100}^{dust}$	$0.99^{+0.37}_{-0.38}$	$D_{220}$	$5710^{+77}_{-76} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$105.8^{+3.7}_{-3.7} \quad (+0.1\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2529^{+27}_{-27} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.5\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	$815.6^{+9.5}_{-9.4} \quad (+0.1\sigma)$	$\chi_{lowTEB}^2$	$10497.9 \quad (\nu: 3.5) \quad (-0.4\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.972^{+0.012}_{-0.014} \quad (+0.6\sigma)$	$\chi_{CamSpec}^2$	$12952.4 \quad (\nu: 21.0)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.24496^{+0.00014}_{-0.00013} \quad (-5.3\sigma)$	$\chi_{JLA}^2$	$706.68 \quad (\nu: 0.0) \quad (-0.4\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0035} \quad (+0.7\sigma)$	$Age/Gyr$	$13.786^{+0.053}_{-0.052} \quad (-0.6\sigma)$	$\chi_{prior}^2$	$9.1 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{TE}$	$1.0046^{+0.0088}_{-0.0088}$	$z_*$	$1089.76^{+0.56}_{-0.55} \quad (-0.7\sigma)$	$\chi_{CMB}^2$	$23450.3 \quad (\nu: 19.9) \quad (+1505.7\sigma)$

$$\bar{\chi}_{eff}^2 = 24166.08; \Delta\bar{\chi}_{eff}^2 = 10490.10; R - 1 = 0.00946$$

## 6.25 base\_alpha1\_CamSpecHM\_TTTEEE\_lowTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00032}_{-0.00032} \quad (+0.6\sigma)$	$c_{EE}$	$1.0025^{+0.0084}_{-0.0085}$	$r_*$	$145.07^{+0.75}_{-0.82} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1177^{+0.0034}_{-0.0031} \quad (-0.4\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.04140^{+0.00082}_{-0.00082} \quad (+0.1\sigma)$
$100\theta_{MC}$	$1.04120^{+0.00082}_{-0.00082} \quad (+0.1\sigma)$	$H_0$	$68.2^{+1.4}_{-1.5} \quad (+0.4\sigma)$	$z_{drag}$	$1059.67^{+0.68}_{-0.68} \quad (+0.5\sigma)$
$\tau$	$0.070^{+0.028}_{-0.028} \quad (+0.3\sigma)$	$\Omega_\Lambda$	$0.698^{+0.020}_{-0.020} \quad (+0.4\sigma)$	$r_{drag}$	$147.75^{+0.76}_{-0.86} \quad (+0.1\sigma)$
$\alpha_{-1}$	$0.0006^{+0.0016}_{-0.0012} \quad (+0.0\sigma)$	$\Omega_m$	$0.302^{+0.020}_{-0.020} \quad (-0.4\sigma)$	$k_D$	$0.14016^{+0.00093}_{-0.00088} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.065^{+0.049}_{-0.050} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1407^{+0.0033}_{-0.0030} \quad (-0.3\sigma)$	$100\theta_D$	$0.16091^{+0.00042}_{-0.00045} \quad (-0.6\sigma)$
$n_s$	$0.973^{+0.012}_{-0.014} \quad (+0.5\sigma)$	$\Omega_m h^3$	$0.09598^{+0.00060}_{-0.00061} \quad (+0.3\sigma)$	$z_{eq}$	$3346^{+78}_{-72} \quad (-0.3\sigma)$
$y_{cal}$	$1.0003^{+0.0050}_{-0.0050} \quad (+0.0\sigma)$	$\sigma_8$	$0.816^{+0.017}_{-0.017} \quad (+0.0\sigma)$	$100\theta_{eq}$	$0.824^{+0.014}_{-0.015} \quad (+0.3\sigma)$
$A_{100}^{PS}$	$244^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.015}_{-0.015} \quad (-0.4\sigma)$	$r_{drag}/D_V(0.57)$	$0.0721^{+0.0011}_{-0.0012} \quad (+0.3\sigma)$
$A_{143}^{PS}$	$38^{+10}_{-10} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.014}_{-0.014} \quad (-0.3\sigma)$	$H(0.57)$	$93.26^{+0.61}_{-0.61} \quad (+0.4\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$0.988^{+0.020}_{-0.020} \quad (-0.2\sigma)$	$D_A(0.57)$	$1379^{+20}_{-19} \quad (-0.4\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.439^{+0.049}_{-0.049} \quad (-0.4\sigma)$	$F_{AP}(0.57)$	$0.6736^{+0.0052}_{-0.0051} \quad (-0.4\sigma)$
$A_{143}^{tSZ}$	$< 6.91 \quad (-1.0\sigma)$	$z_{re}$	$9.1^{+2.4}_{-2.7} \quad (+0.2\sigma)$	$f\sigma_8(0.57)$	$0.4721^{+0.0099}_{-0.0099} \quad (-0.2\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.22}_{-0.21}$	$10^9 A_s$	$2.14^{+0.11}_{-0.11} \quad (+0.1\sigma)$	$\sigma_8(0.57)$	$0.610^{+0.015}_{-0.015} \quad (+0.1\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.865^{+0.025}_{-0.025} \quad (-0.5\sigma)$	$Y_P^{BBN}$	$0.24629^{+0.00014}_{-0.00014} \quad (-5.1\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1231^{+25}_{-27} \quad (-0.6\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$A_{100}^{dust}$	$0.99^{+0.37}_{-0.39}$	$D_{220}$	$5707^{+76}_{-76} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.1^{+3.6}_{-3.7} \quad (+0.0\sigma)$
$A_{143}^{dust}$	$1.03^{+0.35}_{-0.36}$	$D_{810}$	$2528^{+26}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$A_{217}^{dust}$	$1.21^{+0.22}_{-0.23}$	$D_{1420}$	$815.6^{+9.7}_{-9.4} \quad (+0.0\sigma)$	$\chi^2_{lensing}$	$9.6 \quad (\nu: 0.8) \quad (-0.3\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.973^{+0.012}_{-0.014} \quad (+0.5\sigma)$	$\chi^2_{lowTEB}$	$10497.0 \quad (\nu: 2.0) \quad (-0.4\sigma)$
$c_{100}$	$0.9967^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.24496^{+0.00014}_{-0.00013} \quad (-5.2\sigma)$	$\chi^2_{CamSpec}$	$12953.1 \quad (\nu: 20.2)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0035} \quad (+0.6\sigma)$	$Age/Gyr$	$13.782^{+0.052}_{-0.052} \quad (-0.5\sigma)$	$\chi^2_{prior}$	$9.2 \quad (\nu: 6.4) \quad (-1.8\sigma)$
$c_{TE}$	$1.0053^{+0.0085}_{-0.0084}$	$z_*$	$1089.74^{+0.58}_{-0.55} \quad (-0.6\sigma)$	$\chi^2_{CMB}$	$23459.8 \quad (\nu: 20.1) \quad (+1510.8\sigma)$

$$\bar{\chi}^2_{eff} = 23468.99; \Delta\bar{\chi}^2_{eff} = 10488.71; R - 1 = 0.01383$$

## 6.26 base\_alpha1\_CamSpecHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00031}_{-0.00032} \quad (+0.6\sigma)$	$c_{EE}$	$1.0020^{+0.0086}_{-0.0087}$	$r_*$	$144.97^{+0.79}_{-0.90} \quad (+0.4\sigma)$
$\Omega_c h^2$	$0.1180^{+0.0035}_{-0.0035} \quad (-0.5\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.04133^{+0.00085}_{-0.00089} \quad (+0.2\sigma)$
$100\theta_{MC}$	$1.04113^{+0.00085}_{-0.00089} \quad (+0.2\sigma)$	$H_0$	$68.1^{+1.5}_{-1.6} \quad (+0.5\sigma)$	$z_{drag}$	$1059.74^{+0.69}_{-0.68} \quad (+0.4\sigma)$
$\tau$	$0.079^{+0.033}_{-0.034} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.696^{+0.021}_{-0.021} \quad (+0.5\sigma)$	$r_{drag}$	$147.65^{+0.80}_{-0.92} \quad (+0.3\sigma)$
$\alpha_{-1}$	$0.0005^{+0.0017}_{-0.0011} \quad (+0.1\sigma)$	$\Omega_m$	$0.304^{+0.021}_{-0.021} \quad (-0.5\sigma)$	$k_D$	$0.1403^{+0.0010}_{-0.00089} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.086^{+0.065}_{-0.068} \quad (-0.2\sigma)$	$\Omega_m h^2$	$0.1410^{+0.0035}_{-0.0034} \quad (-0.4\sigma)$	$100\theta_D$	$0.16086^{+0.00044}_{-0.00044} \quad (-0.5\sigma)$
$n_s$	$0.973^{+0.012}_{-0.014} \quad (+0.6\sigma)$	$\Omega_m h^3$	$0.09604^{+0.00061}_{-0.00059} \quad (+0.2\sigma)$	$z_{eq}$	$3353^{+83}_{-80} \quad (-0.4\sigma)$
$y_{cal}$	$1.0004^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8$	$0.825^{+0.026}_{-0.026} \quad (-0.4\sigma)$	$100\theta_{eq}$	$0.822^{+0.015}_{-0.016} \quad (+0.5\sigma)$
$A_{100}^{PS}$	$243^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.023}_{-0.021} \quad (-0.6\sigma)$	$r_{drag}/D_V(0.57)$	$0.0720^{+0.0012}_{-0.0013} \quad (+0.5\sigma)$
$A_{143}^{PS}$	$38^{+10}_{-10} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.613^{+0.023}_{-0.022} \quad (-0.6\sigma)$	$H(0.57)$	$93.23^{+0.62}_{-0.63} \quad (+0.6\sigma)$
$A_{217}^{PS}$	$100^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$0.9999^{+0.035}_{-0.033} \quad (-0.5\sigma)$	$D_A(0.57)$	$1381^{+21}_{-19} \quad (-0.5\sigma)$
$A_{217}^{CIB}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.468^{+0.085}_{-0.081} \quad (-0.6\sigma)$	$F_{AP}(0.57)$	$0.6741^{+0.0054}_{-0.0053} \quad (-0.5\sigma)$
$A_{143}^{tSZ}$	$< 6.96 \quad (-1.0\sigma)$	$z_{re}$	$9.97^{+3.0}_{-3.1} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.478^{+0.017}_{-0.016} \quad (-0.5\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.22}$	$10^9 A_s$	$2.19^{+0.15}_{-0.14} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.616^{+0.020}_{-0.020} \quad (-0.2\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.868^{+0.027}_{-0.026} \quad (-0.6\sigma)$	$Y_P^{BBN}$	$0.24630^{+0.00013}_{-0.00014} \quad (-5.2\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1234^{+28}_{-28} \quad (-0.7\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.4\sigma)$
$A_{100}^{dust}$	$0.98^{+0.37}_{-0.38}$	$D_{220}$	$5711^{+77}_{-76} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$105.8^{+3.7}_{-3.7} \quad (+0.1\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2529^{+27}_{-27} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.5\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	$815.7^{+9.5}_{-9.3} \quad (+0.1\sigma)$	$\chi_{lowTEB}^2$	$10498.0 \quad (\nu: 3.6) \quad (-0.4\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.973^{+0.012}_{-0.014} \quad (+0.6\sigma)$	$\chi_{CamSpec}^2$	$12952.4 \quad (\nu: 21.1)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.24497^{+0.00014}_{-0.00013} \quad (-5.3\sigma)$	$\chi_{H070p6}^2$	$0.60 \quad (\nu: 0.1) \quad (-0.5\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0035} \quad (+0.7\sigma)$	$Age/Gyr$	$13.784^{+0.054}_{-0.053} \quad (-0.6\sigma)$	$\chi_{prior}^2$	$9.1 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{TE}$	$1.0046^{+0.0088}_{-0.0088}$	$z_*$	$1089.74^{+0.57}_{-0.55} \quad (-0.7\sigma)$	$\chi_{CMB}^2$	$23450.4 \quad (\nu: 20.0) \quad (+1501.5\sigma)$

$$\bar{\chi}_{eff}^2 = 23460.09; \Delta \bar{\chi}_{eff}^2 = 10490.01; R - 1 = 0.01020$$

## 6.27 base\_alpha1\_CamSpecHM\_TTTEEE\_lowTEB\_post\_lensing\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00031}_{-0.00030} \quad (+0.5\sigma)$	$\Omega_\Lambda$	$0.696^{+0.013}_{-0.013} \quad (+0.3\sigma)$	$z_{\text{eq}}$	$3353^{+52}_{-49} \quad (-0.2\sigma)$
$\Omega_c h^2$	$0.1180^{+0.0022}_{-0.0021} \quad (-0.2\sigma)$	$\Omega_m$	$0.304^{+0.013}_{-0.013} \quad (-0.3\sigma)$	$100\theta_{\text{eq}}$	$0.8222^{+0.0094}_{-0.0096} \quad (+0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04115^{+0.00066}_{-0.00069} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1410^{+0.0022}_{-0.0020} \quad (-0.2\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07202^{+0.00076}_{-0.00076} \quad (+0.2\sigma)$
$\tau$	$0.067^{+0.024}_{-0.024} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.09599^{+0.00060}_{-0.00061} \quad (+0.3\sigma)$	$H(0.57)$	$93.19^{+0.44}_{-0.42} \quad (+0.4\sigma)$
$\alpha_{-1}$	$0.0005^{+0.0013}_{-0.0010} \quad (-0.1\sigma)$	$\sigma_8$	$0.816^{+0.017}_{-0.017} \quad (-0.1\sigma)$	$D_A(0.57)$	$1381^{+13}_{-13} \quad (-0.3\sigma)$
$\ln(10^{10} A_s)$	$3.062^{+0.045}_{-0.045} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.012}_{-0.012} \quad (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6741^{+0.0034}_{-0.0032} \quad (-0.3\sigma)$
$n_s$	$0.9724^{+0.0093}_{-0.010} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.013}_{-0.013} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.4724^{+0.0097}_{-0.0098} \quad (-0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0051} \quad (+0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.989^{+0.020}_{-0.020} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.609^{+0.014}_{-0.013} \quad (+0.0\sigma)$
$A_{100}^{\text{PS}}$	$244^{+40}_{-50} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.440^{+0.049}_{-0.048} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24628^{+0.00013}_{-0.00013} \quad (-5.6\sigma)$
$A_{143}^{\text{PS}}$	$39^{+10}_{-10} \quad (-0.7\sigma)$	$z_{\text{re}}$	$8.9^{+2.3}_{-2.3} \quad (+0.1\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$A_{217}^{\text{PS}}$	$98^{+20}_{-30} \quad (+0.1\sigma)$	$10^9 A_s$	$2.137^{+0.097}_{-0.095} \quad (+0.0\sigma)$	$f_{2000}^{217}$	$106.2^{+3.6}_{-3.6} \quad (+0.1\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.9\sigma)$	$10^9 A_s e^{-2\tau}$	$1.867^{+0.022}_{-0.023} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.87 \quad (-1.0\sigma)$	$D_{40}$	$1231^{+25}_{-27} \quad (-0.6\sigma)$	$\chi_{\text{lensing}}^2$	$9.7 \quad (\nu: 0.8) \quad (-0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.22}_{-0.21}$	$D_{220}$	$5706^{+74}_{-77} \quad (-0.4\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.8 \quad (\nu: 1.7) \quad (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2528^{+26}_{-27} \quad (-0.3\sigma)$	$\chi_{\text{CamSpec}}^2$	$12952.6 \quad (\nu: 19.7)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$815.4^{+9.6}_{-9.3} \quad (+0.0\sigma)$	$\chi_{\text{H070p6}}^2$	$0.59 \quad (\nu: 0.0) \quad (-0.3\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.39}$	$n_{s,0.002}$	$0.9724^{+0.0093}_{-0.010} \quad (+0.4\sigma)$	$\chi_{\text{JLA}}^2$	$706.61 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.35}_{-0.36}$	$Y_{\text{P}}$	$0.24495^{+0.00014}_{-0.00013} \quad (-5.7\sigma)$	$\chi_{6\text{DF}}^2$	$0.032 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.23}$	$\text{Age/Gyr}$	$13.787^{+0.040}_{-0.041} \quad (-0.4\sigma)$	$\chi_{\text{MGS}}^2$	$1.81 \quad (\nu: 0.1) \quad (+0.2\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.36}_{-0.35}$	$z_*$	$1089.79^{+0.46}_{-0.47} \quad (-0.6\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.87 \quad (\nu: 0.2) \quad (+0.1\sigma)$
$c_{100}$	$0.9967^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$r_*$	$144.99^{+0.53}_{-0.57} \quad (+0.0\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.34 \quad (\nu: 0.1) \quad (-0.2\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0035} \quad (+0.7\sigma)$	$100\theta_*$	$1.04135^{+0.00067}_{-0.00070} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$9.2 \quad (\nu: 6.4) \quad (-1.8\sigma)$
$c_{TE}$	$1.0054^{+0.0084}_{-0.0086}$	$z_{\text{drag}}$	$1059.66^{+0.69}_{-0.67} \quad (+0.5\sigma)$	$\chi_{\text{CMB}}^2$	$23459.1 \quad (\nu: 19.4) \quad (+1538.2\sigma)$
$c_{EE}$	$1.0024^{+0.0084}_{-0.0086}$	$r_{\text{drag}}$	$147.68^{+0.57}_{-0.61} \quad (-0.1\sigma)$	$\chi_{\text{BAO}}^2$	$5.06 \quad (\nu: 0.5) \quad (+0.2\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$k_{\text{D}}$	$0.14022^{+0.00077}_{-0.00069} \quad (+0.3\sigma)$		
$H_0$	$68.10^{+0.98}_{-0.97} \quad (+0.3\sigma)$	$100\theta_{\text{D}}$	$0.16091^{+0.00043}_{-0.00046} \quad (-0.6\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 24180.62; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.81; R - 1 = 0.01068$$



## 6.28 base\_alpha1\_CamSpecHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00032}_{-0.00032} \quad (+0.6\sigma)$	$c_{EE}$	$1.0018^{+0.0086}_{-0.0087}$	$r_*$	$144.90^{+0.82}_{-0.94} \quad (+0.4\sigma)$
$\Omega_c h^2$	$0.1183^{+0.0037}_{-0.0034} \quad (-0.5\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.04127^{+0.00087}_{-0.00092} \quad (+0.2\sigma)$
$100\theta_{MC}$	$1.04107^{+0.00082}_{-0.00092} \quad (+0.2\sigma)$	$H_0$	$68.0^{+1.6}_{-1.6} \quad (+0.5\sigma)$	$z_{drag}$	$1059.74^{+0.69}_{-0.68} \quad (+0.4\sigma)$
$\tau$	$0.079^{+0.031}_{-0.032} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.694^{+0.022}_{-0.022} \quad (+0.5\sigma)$	$r_{drag}$	$147.58^{+0.83}_{-0.97} \quad (+0.3\sigma)$
$\alpha_{-1}$	$0.0004^{+0.0016}_{-0.0011} \quad (+0.1\sigma)$	$\Omega_m$	$0.306^{+0.022}_{-0.022} \quad (-0.5\sigma)$	$k_D$	$0.1403^{+0.0010}_{-0.00092} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.086^{+0.062}_{-0.063} \quad (-0.2\sigma)$	$\Omega_m h^2$	$0.1412^{+0.0037}_{-0.0033} \quad (-0.5\sigma)$	$100\theta_D$	$0.16085^{+0.00044}_{-0.00044} \quad (-0.5\sigma)$
$n_s$	$0.972^{+0.013}_{-0.014} \quad (+0.6\sigma)$	$\Omega_m h^3$	$0.09605^{+0.00062}_{-0.00059} \quad (+0.2\sigma)$	$z_{eq}$	$3360^{+89}_{-78} \quad (-0.5\sigma)$
$y_{cal}$	$1.0004^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8$	$0.826^{+0.025}_{-0.025} \quad (-0.4\sigma)$	$100\theta_{eq}$	$0.821^{+0.015}_{-0.016} \quad (+0.5\sigma)$
$A_{100}^{PS}$	$243^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.023}_{-0.021} \quad (-0.6\sigma)$	$r_{drag}/D_V(0.57)$	$0.0719^{+0.0012}_{-0.0013} \quad (+0.5\sigma)$
$A_{143}^{PS}$	$38^{+10}_{-10} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.614^{+0.023}_{-0.021} \quad (-0.6\sigma)$	$H(0.57)$	$93.17^{+0.64}_{-0.65} \quad (+0.6\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.002^{+0.034}_{-0.032} \quad (-0.5\sigma)$	$D_A(0.57)$	$1382^{+21}_{-21} \quad (-0.6\sigma)$
$A_{217}^{CIB}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.472^{+0.084}_{-0.082} \quad (-0.6\sigma)$	$F_{AP}(0.57)$	$0.6745^{+0.0057}_{-0.0055} \quad (-0.5\sigma)$
$A_{143}^{tSZ}$	$< 6.93 \quad (-1.0\sigma)$	$z_{re}$	$9.98^{+2.8}_{-2.8} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.479^{+0.016}_{-0.015} \quad (-0.5\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.21}$	$10^9 A_s$	$2.19^{+0.14}_{-0.14} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.616^{+0.019}_{-0.019} \quad (-0.2\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.869^{+0.028}_{-0.026} \quad (-0.7\sigma)$	$Y_P^{BBN}$	$0.24629^{+0.00013}_{-0.00014} \quad (-5.2\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1234^{+28}_{-28} \quad (-0.7\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.4\sigma)$
$A_{100}^{dust}$	$0.99^{+0.37}_{-0.38}$	$D_{220}$	$5710^{+77}_{-76} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$105.9^{+3.6}_{-3.7} \quad (+0.1\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2529^{+27}_{-27} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.5\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	$815.5^{+9.5}_{-9.5} \quad (+0.1\sigma)$	$\chi_{lowTEB}^2$	$10497.8 \quad (\nu: 3.6) \quad (-0.4\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.972^{+0.013}_{-0.014} \quad (+0.6\sigma)$	$\chi_{CamSpec}^2$	$12952.5 \quad (\nu: 21.3)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.24496^{+0.00014}_{-0.00013} \quad (-5.2\sigma)$	$\chi_{prior}^2$	$9.1 \quad (\nu: 6.5) \quad (-1.9\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0035} \quad (+0.7\sigma)$	$Age/Gyr$	$13.788^{+0.054}_{-0.054} \quad (-0.6\sigma)$	$\chi_{CMB}^2$	$23450.3 \quad (\nu: 19.9) \quad (+1511.1\sigma)$
$c_{TE}$	$1.0045^{+0.0088}_{-0.0087}$	$z_*$	$1089.78^{+0.58}_{-0.57} \quad (-0.7\sigma)$		

$$\bar{\chi}_{eff}^2 = 23459.42; \Delta \bar{\chi}_{eff}^2 = 10490.25; R - 1 = 0.00998$$

## 7 mnu

### 7.1 base\_mnu\_plikHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02226	$0.02213^{+0.00051}_{-0.00054}$	$\Omega_m$	0.307	$0.339^{+0.083}_{-0.061}$	$100\theta_*$	1.04107	$1.04096^{+0.00095}_{-0.00095}$
$\Omega_c h^2$	0.11950	$0.1202^{+0.0047}_{-0.0046}$	$\Omega_m h^2$	0.1418	$0.1449^{+0.0082}_{-0.0069}$	$D_A/\text{Gpc}$	13.894	$13.881^{+0.094}_{-0.10}$
$100\theta_{\text{MC}}$	1.04090	$1.0407^{+0.0010}_{-0.0011}$	$\Omega_\nu h^2$	0.00000	$< 0.00769$	$z_{\text{drag}}$	1059.67	$1059.4^{+1.0}_{-1.0}$
$\tau$	0.0789	$0.080^{+0.039}_{-0.039}$	$\Omega_m h^3$	0.09632	$0.0949^{+0.0024}_{-0.0035}$	$r_{\text{drag}}$	147.35	$147.2^{+1.0}_{-1.1}$
$\Sigma m_\nu [\text{eV}]$	0.000	$< 0.715$	$\sigma_8$	0.843	$0.796^{+0.076}_{-0.11}$	$k_D$	0.14051	$0.1406^{+0.0011}_{-0.0010}$
$\ln(10^{10} A_s)$	3.091	$3.095^{+0.075}_{-0.076}$	$\sigma_8 \Omega_m^{0.5}$	0.4672	$0.462^{+0.028}_{-0.029}$	$100\theta_D$	0.16092	$0.16102^{+0.00057}_{-0.00054}$
$n_s$	0.9666	$0.964^{+0.014}_{-0.014}$	$\sigma_8 \Omega_m^{0.25}$	0.6276	$0.606^{+0.044}_{-0.054}$	$z_{\text{eq}}$	3388	$3402^{+110}_{-100}$
$y_{\text{cal}}$	1.0004	$1.0004^{+0.0050}_{-0.0050}$	$\sigma_8/h^{0.5}$	1.023	$0.983^{+0.075}_{-0.096}$	$k_{\text{eq}}$	0.010339	$0.01039^{+0.00033}_{-0.00031}$
$A_{217}^{\text{CIB}}$	66.4	$64^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.505	$2.498^{+0.094}_{-0.092}$	$100\theta_{\text{eq}}$	0.8155	$0.813^{+0.020}_{-0.019}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.08	—	$z_{\text{re}}$	10.04	$10.2^{+3.6}_{-3.7}$	$100\theta_{\text{s,eq}}$	0.4506	$0.449^{+0.010}_{-0.0098}$
$A_{143}^{\text{tSZ}}$	7.13	$5.0^{+3.7}_{-3.8}$	$10^9 A_s$	2.201	$2.21^{+0.17}_{-0.16}$	$r_{\text{drag}}/D_V(0.57)$	0.07181	$0.0703^{+0.0029}_{-0.0037}$
$A_{100}^{\text{PS}}$	251	$260^{+60}_{-50}$	$10^9 A_s e^{-2\tau}$	1.8794	$1.881^{+0.028}_{-0.028}$	$H(0.57)$	93.21	$92.0^{+2.0}_{-2.7}$
$A_{143}^{\text{PS}}$	39.4	$45^{+20}_{-20}$	$D_{40}$	1234.9	$1238^{+30}_{-29}$	$D_A(0.57)$	1383	$1417^{+84}_{-62}$
$A_{143 \times 217}^{\text{PS}}$	34.4	$40^{+20}_{-20}$	$D_{220}$	5716	$5715^{+82}_{-82}$	$F_{\text{AP}}(0.57)$	0.6749	$0.683^{+0.020}_{-0.015}$
$A_{217}^{\text{PS}}$	98.0	$97^{+20}_{-20}$	$D_{810}$	2533.8	$2534^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4879	$0.471^{+0.035}_{-0.045}$
$A^{\text{kSZ}}$	0.0	—	$D_{1420}$	814.8	$814.1^{+9.9}_{-9.9}$	$\sigma_8(0.57)$	0.628	$0.588^{+0.064}_{-0.090}$
$A_{100}^{\text{dustTT}}$	7.46	$7.4^{+3.7}_{-3.7}$	$D_{2000}$	230.63	$229.8^{+3.8}_{-4.0}$	$f_{2000}^{143}$	29.3	$31^{+6}_{-6}$
$A_{143}^{\text{dustTT}}$	9.07	$9.0^{+3.6}_{-3.6}$	$n_{\text{s},0.002}$	0.9666	$0.964^{+0.014}_{-0.014}$	$f_{2000}^{143 \times 217}$	32.00	$33^{+5}_{-4}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.2^{+8.0}_{-8.1}$	$Y_{\text{P}}$	0.245346	$0.24528^{+0.00023}_{-0.00025}$	$f_{2000}^{217}$	105.63	$106.6^{+4.4}_{-4.2}$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	0.246672	$0.24661^{+0.00023}_{-0.00025}$	$\chi_{\text{lowTEB}}^2$	10496.5	$10497.7 (\nu: 3.3)$
$c_{100}$	0.99788	$0.9979^{+0.0015}_{-0.0015}$	$10^5 \text{D}/\text{H}$	2.611	$2.64^{+0.11}_{-0.097}$	$\chi_{\text{plik}}^2$	762.9	$778.5 (\nu: 17.8)$
$c_{217}$	0.99588	$0.9960^{+0.0028}_{-0.0028}$	$\text{Age}/\text{Gyr}$	13.778	$13.91^{+0.31}_{-0.22}$	$\chi_{\text{prior}}^2$	2.1	$7.4 (\nu: 6.5)$
$H_0$	67.9	$65.6^{+4.3}_{-5.7}$	$z_*$	1090.01	$1090.3^{+1.1}_{-1.1}$	$\chi_{\text{CMB}}^2$	11259.5	$11276.2 (\nu: 17.3)$
$\Omega_\Lambda$	0.693	$0.661^{+0.061}_{-0.083}$	$r_*$	144.65	$144.5^{+1.0}_{-1.1}$			

Best-fit  $\chi_{\text{eff}}^2 = 11261.54$ ;  $\bar{\chi}_{\text{eff}}^2 = 11283.63$ ;  $R - 1 = 0.00693$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.52 plik\_dx11dr2\_HM\_v18\_TT: 762.93

## 7.2 base\_mnu\_plikHM\_TT\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022299	$0.02224^{+0.00045}_{-0.00045}$	$\Omega_m$	0.3045	$0.318^{+0.037}_{-0.034}$	$100\theta_*$	1.04115	$1.04110^{+0.00089}_{-0.00091}$
$\Omega_c h^2$	0.11909	$0.1192^{+0.0040}_{-0.0041}$	$\Omega_m h^2$	0.14140	$0.1427^{+0.0046}_{-0.0043}$	$D_A/\text{Gpc}$	13.901	$13.900^{+0.085}_{-0.082}$
$100\theta_{\text{MC}}$	1.04099	$1.04088^{+0.00091}_{-0.00093}$	$\Omega_\nu h^2$	0.00002	$< 0.00353$	$z_{\text{drag}}$	1059.70	$1059.59^{+0.94}_{-0.91}$
$\tau$	0.0797	$0.081^{+0.039}_{-0.039}$	$\Omega_m h^3$	0.09636	$0.0957^{+0.0015}_{-0.0018}$	$r_{\text{drag}}$	147.42	$147.43^{+0.93}_{-0.88}$
$\Sigma m_\nu [\text{eV}]$	0.001	$< 0.328$	$\sigma_8$	0.842	$0.819^{+0.049}_{-0.055}$	$k_D$	0.14046	$0.14042^{+0.00099}_{-0.0010}$
$\ln(10^{10} A_s)$	3.092	$3.095^{+0.074}_{-0.076}$	$\sigma_8 \Omega_m^{0.5}$	0.4646	$0.461^{+0.026}_{-0.026}$	$100\theta_D$	0.16090	$0.16095^{+0.00053}_{-0.00051}$
$n_s$	0.9673	$0.967^{+0.011}_{-0.012}$	$\sigma_8 \Omega_m^{0.25}$	0.6255	$0.615^{+0.033}_{-0.035}$	$z_{\text{eq}}$	3379	$3381^{+90}_{-92}$
$y_{\text{cal}}$	1.00028	$1.0003^{+0.0050}_{-0.0049}$	$\sigma_8/h^{0.5}$	1.020	$1.000^{+0.053}_{-0.056}$	$k_{\text{eq}}$	0.010312	$0.01032^{+0.00028}_{-0.00028}$
$A_{217}^{\text{CIB}}$	66.8	$64^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.500	$2.491^{+0.091}_{-0.091}$	$100\theta_{\text{eq}}$	0.8173	$0.817^{+0.018}_{-0.017}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.03	—	$z_{\text{re}}$	10.10	$10.2^{+3.6}_{-3.7}$	$100\theta_{s,\text{eq}}$	0.4515	$0.4513^{+0.0091}_{-0.0087}$
$A_{143}^{\text{tSZ}}$	7.25	$5.2^{+3.7}_{-3.8}$	$10^9 A_s$	2.202	$2.21^{+0.17}_{-0.16}$	$r_{\text{drag}}/D_V(0.57)$	0.07196	$0.0713^{+0.0018}_{-0.0019}$
$A_{100}^{\text{PS}}$	250	$258^{+50}_{-50}$	$10^9 A_s e^{-2\tau}$	1.8777	$1.877^{+0.027}_{-0.026}$	$H(0.57)$	93.30	$92.7^{+1.3}_{-1.4}$
$A_{143}^{\text{PS}}$	38.0	$44^{+20}_{-20}$	$D_{40}$	1233.7	$1235^{+30}_{-28}$	$D_A(0.57)$	1380.0	$1396^{+40}_{-36}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{220}$	5720	$5718^{+81}_{-81}$	$F_{\text{AP}}(0.57)$	0.6742	$0.6776^{+0.0092}_{-0.0086}$
$A_{217}^{\text{PS}}$	97.3	$98^{+20}_{-20}$	$D_{810}$	2533.3	$2533^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4866	$0.479^{+0.024}_{-0.026}$
$A^{\text{kSZ}}$	0.02	$< 8.24$	$D_{1420}$	814.9	$814.6^{+9.8}_{-9.8}$	$\sigma_8(0.57)$	0.6277	$0.608^{+0.040}_{-0.045}$
$A_{100}^{\text{dustTT}}$	7.47	$7.4^{+3.6}_{-3.7}$	$D_{2000}$	230.69	$230.3^{+3.7}_{-3.7}$	$f_{2000}^{143}$	29.2	$30^{+6}_{-6}$
$A_{143}^{\text{dustTT}}$	9.01	$9.0^{+3.6}_{-3.6}$	$n_{s,0.002}$	0.9673	$0.967^{+0.011}_{-0.012}$	$f_{2000}^{143 \times 217}$	31.96	$32^{+4}_{-4}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.1^{+7.9}_{-8.0}$	$Y_{\text{P}}$	0.245362	$0.24533^{+0.00020}_{-0.00020}$	$f_{2000}^{217}$	105.66	$106.0^{+4.1}_{-4.0}$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	0.246688	$0.24666^{+0.00020}_{-0.00020}$	$\chi_{\text{lowTEB}}^2$	10496.47	$10497.5 (\nu: 3.3)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	$10^5 D/H$	2.605	$2.616^{+0.087}_{-0.085}$	$\chi_{\text{plik}}^2$	763.0	$777.7 (\nu: 17.0)$
$c_{217}$	0.99592	$0.9959^{+0.0028}_{-0.0029}$	Age/Gyr	13.770	$13.83^{+0.15}_{-0.13}$	$\chi_{\text{JLA}}^2$	706.58	$707.22 (\nu: 0.4)$
$H_0$	68.15	$67.1^{+2.6}_{-2.8}$	$z_*$	1089.92	$1090.02^{+0.83}_{-0.81}$	$\chi_{\text{prior}}^2$	2.1	$7.3 (\nu: 6.2)$
$\Omega_\Lambda$	0.6955	$0.682^{+0.034}_{-0.037}$	$r_*$	144.73	$144.72^{+0.93}_{-0.89}$	$\chi_{\text{CMB}}^2$	11259.5	$11275.2 (\nu: 16.0)$

Best-fit  $\chi_{\text{eff}}^2 = 11968.16$ ;  $\bar{\chi}_{\text{eff}}^2 = 11989.73$ ;  $R - 1 = 0.01054$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.47 plik\_dx11dr2\_HM\_v18\_TT: 763.00 SN - JLA December\_2013: 706.59

### 7.3 base\_mnu\_plikHM\_TT\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022294	$0.02225^{+0.00046}_{-0.00046}$	$\Omega_m$	0.3042	$0.317^{+0.039}_{-0.036}$	$100\theta_*$	1.04116	$1.04112^{+0.00090}_{-0.00092}$
$\Omega_c h^2$	0.11905	$0.1192^{+0.0042}_{-0.0041}$	$\Omega_m h^2$	0.14135	$0.1427^{+0.0049}_{-0.0048}$	$D_A/\text{Gpc}$	13.902	$13.901^{+0.089}_{-0.085}$
$100\theta_{\text{MC}}$	1.04099	$1.04090^{+0.00093}_{-0.00094}$	$\Omega_\nu h^2$	0.00001	$< 0.00353$	$z_{\text{drag}}$	1059.70	$1059.61^{+0.93}_{-0.93}$
$\tau$	0.0800	$0.082^{+0.039}_{-0.040}$	$\Omega_m h^3$	0.09635	$0.0957^{+0.0015}_{-0.0018}$	$r_{\text{drag}}$	147.43	$147.43^{+0.96}_{-0.91}$
$\Sigma m_\nu [\text{eV}]$	0.001	$< 0.328$	$\sigma_8$	0.842	$0.820^{+0.049}_{-0.056}$	$k_D$	0.14044	$0.1404^{+0.0010}_{-0.0010}$
$\ln(10^{10} A_s)$	3.092	$3.096^{+0.075}_{-0.077}$	$\sigma_8 \Omega_m^{0.5}$	0.4646	$0.461^{+0.027}_{-0.026}$	$100\theta_D$	0.16091	$0.16094^{+0.00053}_{-0.00052}$
$n_s$	0.9676	$0.967^{+0.012}_{-0.012}$	$\sigma_8 \Omega_m^{0.25}$	0.6255	$0.615^{+0.033}_{-0.034}$	$z_{\text{eq}}$	3378	$3380^{+94}_{-95}$
$y_{\text{cal}}$	1.00029	$1.0003^{+0.0050}_{-0.0049}$	$\sigma_8/h^{0.5}$	1.020	$1.001^{+0.053}_{-0.056}$	$k_{\text{eq}}$	0.010309	$0.01032^{+0.00029}_{-0.00029}$
$A_{217}^{\text{CIB}}$	66.4	$64^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.499	$2.491^{+0.091}_{-0.091}$	$100\theta_{\text{eq}}$	0.8175	$0.817^{+0.018}_{-0.018}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.10	—	$z_{\text{re}}$	10.13	$10.2^{+3.6}_{-3.7}$	$100\theta_{s,\text{eq}}$	0.4516	$0.4515^{+0.0095}_{-0.0091}$
$A_{143}^{\text{tSZ}}$	7.11	$5.2^{+3.7}_{-3.8}$	$10^9 A_s$	2.203	$2.21^{+0.17}_{-0.16}$	$r_{\text{drag}}/D_V(0.57)$	0.07198	$0.0713^{+0.0020}_{-0.0020}$
$A_{100}^{\text{PS}}$	252	$257^{+50}_{-50}$	$10^9 A_s e^{-2\tau}$	1.8772	$1.877^{+0.027}_{-0.027}$	$H(0.57)$	93.30	$92.8^{+1.3}_{-1.5}$
$A_{143}^{\text{PS}}$	39.8	$43^{+20}_{-20}$	$D_{40}$	1233.0	$1235^{+30}_{-28}$	$D_A(0.57)$	1379.8	$1395^{+42}_{-38}$
$A_{143 \times 217}^{\text{PS}}$	35.1	$39^{+20}_{-20}$	$D_{220}$	5718	$5718^{+81}_{-82}$	$F_{\text{AP}}(0.57)$	0.6742	$0.6774^{+0.0098}_{-0.0091}$
$A_{217}^{\text{PS}}$	98.0	$98^{+20}_{-20}$	$D_{810}$	2533.1	$2533^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4866	$0.479^{+0.024}_{-0.025}$
$A^{\text{kSZ}}$	0.01	$< 8.23$	$D_{1420}$	814.9	$814.7^{+9.8}_{-9.9}$	$\sigma_8(0.57)$	0.6279	$0.609^{+0.040}_{-0.046}$
$A_{100}^{\text{dustTT}}$	7.43	$7.4^{+3.6}_{-3.7}$	$D_{2000}$	230.70	$230.4^{+3.7}_{-3.7}$	$f_{2000}^{143}$	29.3	$30^{+6}_{-6}$
$A_{143}^{\text{dustTT}}$	9.09	$9.0^{+3.6}_{-3.6}$	$n_{s,0.002}$	0.9676	$0.967^{+0.012}_{-0.012}$	$f_{2000}^{143 \times 217}$	32.02	$32^{+4}_{-4}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.1^{+7.9}_{-8.0}$	$Y_{\text{P}}$	0.245359	$0.24534^{+0.00021}_{-0.00021}$	$f_{2000}^{217}$	105.57	$106.0^{+4.1}_{-4.0}$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	0.246686	$0.24667^{+0.00021}_{-0.00021}$	$\chi_{\text{lowTEB}}^2$	10496.42	$10497.5 (\nu: 3.3)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	$10^5 D/H$	2.606	$2.614^{+0.089}_{-0.086}$	$\chi_{\text{plik}}^2$	763.1	$777.7 (\nu: 17.1)$
$c_{217}$	0.99588	$0.9959^{+0.0028}_{-0.0029}$	Age/Gyr	13.770	$13.83^{+0.16}_{-0.13}$	$\chi_{\text{H070p6}}^2$	0.54	$1.3 (\nu: 0.5)$
$H_0$	68.16	$67.1^{+2.8}_{-3.0}$	$z_*$	1089.93	$1090.00^{+0.86}_{-0.83}$	$\chi_{\text{prior}}^2$	2.0	$7.3 (\nu: 6.2)$
$\Omega_\Lambda$	0.6958	$0.683^{+0.036}_{-0.039}$	$r_*$	144.74	$144.72^{+0.97}_{-0.92}$	$\chi_{\text{CMB}}^2$	11259.6	$11275.2 (\nu: 16.1)$

Best-fit  $\chi_{\text{eff}}^2 = 11262.11$ ;  $\bar{\chi}_{\text{eff}}^2 = 11283.80$ ;  $R - 1 = 0.01188$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.42 plik\_dx11dr2\_HM\_v18\_TT: 763.15 Hubble - H070p6: 0.54

#### 7.4 base\_mnu\_plikHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02214^{+0.00051}_{-0.00054}$	$\Omega_m$	$0.339^{+0.085}_{-0.061}$	$100\theta_*$	$1.04097^{+0.00095}_{-0.00095}$
$\Omega_c h^2$	$0.1202^{+0.0047}_{-0.0045}$	$\Omega_m h^2$	$0.1449^{+0.0083}_{-0.0069}$	$D_A/\text{Gpc}$	$13.881^{+0.094}_{-0.099}$
$100\theta_{\text{MC}}$	$1.0407^{+0.0010}_{-0.0011}$	$\Omega_\nu h^2$	$< 0.00775$	$z_{\text{drag}}$	$1059.44^{+0.99}_{-1.0}$
$\tau$	$0.082^{+0.036}_{-0.037}$	$\Omega_m h^3$	$0.0949^{+0.0024}_{-0.0036}$	$r_{\text{drag}}$	$147.2^{+1.0}_{-1.0}$
$\Sigma m_\nu [\text{eV}]$	$< 0.721$	$\sigma_8$	$0.796^{+0.076}_{-0.11}$	$k_D$	$0.1406^{+0.0011}_{-0.0011}$
$\ln(10^{10} A_s)$	$3.098^{+0.070}_{-0.071}$	$\sigma_8 \Omega_m^{0.5}$	$0.462^{+0.028}_{-0.028}$	$100\theta_D$	$0.16101^{+0.00057}_{-0.00054}$
$n_s$	$0.964^{+0.014}_{-0.014}$	$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.044}_{-0.055}$	$z_{\text{eq}}$	$3402^{+100}_{-100}$
$y_{\text{cal}}$	$1.0004^{+0.0050}_{-0.0050}$	$\sigma_8/h^{0.5}$	$0.983^{+0.075}_{-0.097}$	$k_{\text{eq}}$	$0.01039^{+0.00032}_{-0.00031}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	$2.501^{+0.092}_{-0.087}$	$100\theta_{\text{eq}}$	$0.813^{+0.019}_{-0.019}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$z_{\text{re}}$	$10.3^{+3.1}_{-3.5}$	$100\theta_{\text{s,eq}}$	$0.449^{+0.010}_{-0.0097}$
$A_{143}^{\text{tSZ}}$	$5.1^{+3.7}_{-3.8}$	$10^9 A_s$	$2.22^{+0.16}_{-0.16}$	$r_{\text{drag}}/D_V(0.57)$	$0.0703^{+0.0029}_{-0.0038}$
$A_{100}^{\text{PS}}$	$260^{+60}_{-50}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.028}_{-0.027}$	$H(0.57)$	$92.0^{+2.1}_{-2.8}$
$A_{143}^{\text{PS}}$	$45^{+20}_{-20}$	$D_{40}$	$1238^{+30}_{-29}$	$D_A(0.57)$	$1417^{+85}_{-62}$
$A_{143 \times 217}^{\text{PS}}$	$40^{+20}_{-20}$	$D_{220}$	$5715^{+81}_{-82}$	$F_{\text{AP}}(0.57)$	$0.683^{+0.020}_{-0.015}$
$A_{217}^{\text{PS}}$	$98^{+20}_{-20}$	$D_{810}$	$2534^{+27}_{-27}$	$f\sigma_8(0.57)$	$0.471^{+0.035}_{-0.046}$
$A^{\text{kSZ}}$	—	$D_{1420}$	$814.2^{+9.9}_{-10}$	$\sigma_8(0.57)$	$0.588^{+0.064}_{-0.091}$
$A_{100}^{\text{dustTT}}$	$7.4^{+3.7}_{-3.7}$	$D_{2000}$	$229.8^{+3.8}_{-4.0}$	$f_{2000}^{143}$	$31^{+6}_{-6}$
$A_{143}^{\text{dustTT}}$	$9.0^{+3.6}_{-3.7}$	$n_{\text{s},0.002}$	$0.964^{+0.014}_{-0.014}$	$f_{2000}^{143 \times 217}$	$33^{+5}_{-4}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.2^{+8.0}_{-8.1}$	$Y_{\text{P}}$	$0.24529^{+0.00023}_{-0.00025}$	$f_{2000}^{217}$	$106.5^{+4.3}_{-4.2}$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24661^{+0.00023}_{-0.00025}$	$\chi_{\text{lowTEB}}^2$	$10497.8 (\nu: 3.4)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$10^5 \text{D}/\text{H}$	$2.64^{+0.11}_{-0.097}$	$\chi_{\text{plik}}^2$	$778.4 (\nu: 17.7)$
$c_{217}$	$0.9960^{+0.0028}_{-0.0029}$	$\text{Age}/\text{Gyr}$	$13.91^{+0.32}_{-0.22}$	$\chi_{\text{prior}}^2$	$7.4 (\nu: 6.4)$
$H_0$	$65.6^{+4.3}_{-5.8}$	$z_*$	$1090.3^{+1.1}_{-1.1}$	$\chi_{\text{CMB}}^2$	$11276.1 (\nu: 17.1)$
$\Omega_\Lambda$	$0.661^{+0.061}_{-0.085}$	$r_*$	$144.5^{+1.0}_{-1.1}$		

$$\bar{\chi}_{\text{eff}}^2 = 11283.53; R - 1 = 0.00979$$

## 7.5 base\_mnu\_plikHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022256	$0.02222^{+0.00032}_{-0.00033}$	$A_{100 \times 217}^{\text{dust}TE}$	0.304	$0.30^{+0.17}_{-0.16}$	$10^5 \text{D/H}$	2.613	$2.620^{+0.065}_{-0.060}$
$\Omega_c h^2$	0.11979	$0.1200^{+0.0029}_{-0.0029}$	$A_{143}^{\text{dust}TE}$	0.156	$0.16^{+0.11}_{-0.10}$	Age/Gyr	13.784	$13.87^{+0.20}_{-0.15}$
$100\theta_{\text{MC}}$	1.04077	$1.04068^{+0.00066}_{-0.00067}$	$A_{143 \times 217}^{\text{dust}TE}$	0.340	$0.34^{+0.16}_{-0.16}$	$z_*$	1090.04	$1090.13^{+0.67}_{-0.62}$
$\tau$	0.0769	$0.083^{+0.034}_{-0.034}$	$A_{217}^{\text{dust}TE}$	1.67	$1.67^{+0.50}_{-0.50}$	$r_*$	144.58	$144.53^{+0.64}_{-0.66}$
$\Sigma m_\nu$ [eV]	0.002	$< 0.492$	$c_{100}$	0.99821	$0.9982^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04094	$1.04093^{+0.00062}_{-0.00062}$
$\ln(10^{10} A_s)$	3.089	$3.100^{+0.066}_{-0.067}$	$c_{217}$	0.99590	$0.9960^{+0.0029}_{-0.0028}$	$D_A/\text{Gpc}$	13.889	$13.885^{+0.059}_{-0.061}$
$n_s$	0.9651	$0.9639^{+0.0097}_{-0.0098}$	$H_0$	67.79	$66.3^{+2.9}_{-3.7}$	$z_{\text{drag}}$	1059.67	$1059.60^{+0.62}_{-0.60}$
$y_{\text{cal}}$	1.00033	$1.0005^{+0.0049}_{-0.0048}$	$\Omega_\Lambda$	0.6909	$0.672^{+0.038}_{-0.050}$	$r_{\text{drag}}$	147.28	$147.24^{+0.63}_{-0.63}$
$A_{217}^{\text{CIB}}$	65.1	$64^{+10}_{-10}$	$\Omega_m$	0.3091	$0.328^{+0.050}_{-0.038}$	$k_D$	0.14057	$0.14060^{+0.00066}_{-0.00065}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.27	—	$\Omega_m h^2$	0.14207	$0.1440^{+0.0051}_{-0.0044}$	$100\theta_D$	0.160903	$0.16092^{+0.00036}_{-0.00035}$
$A_{143}^{\text{tSZ}}$	7.03	$5.3^{+3.6}_{-3.7}$	$\Omega_\nu h^2$	0.00002	$< 0.00528$	$z_{\text{eq}}$	3394	$3398^{+66}_{-65}$
$A_{100}^{\text{PS}}$	254	$261^{+50}_{-50}$	$\Omega_m h^3$	0.09631	$0.0954^{+0.0016}_{-0.0023}$	$k_{\text{eq}}$	0.010360	$0.01037^{+0.00020}_{-0.00020}$
$A_{143}^{\text{PS}}$	42.7	$44^{+10}_{-20}$	$\sigma_8$	0.842	$0.812^{+0.057}_{-0.074}$	$100\theta_{\text{eq}}$	0.8142	$0.814^{+0.012}_{-0.012}$
$A_{143 \times 217}^{\text{PS}}$	40.7	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4684	$0.464^{+0.021}_{-0.022}$	$100\theta_{s,\text{eq}}$	0.4499	$0.4497^{+0.0064}_{-0.0062}$
$A_{217}^{\text{PS}}$	100.9	$98^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6282	$0.614^{+0.034}_{-0.039}$	$r_{\text{drag}}/D_V(0.57)$	0.07169	$0.0708^{+0.0019}_{-0.0024}$
$A^{\text{kSZ}}$	0.00	$< 7.95$	$\sigma_8/h^{0.5}$	1.023	$0.997^{+0.057}_{-0.068}$	$H(0.57)$	93.14	$92.4^{+1.4}_{-1.8}$
$A_{100}^{\text{dust}TT}$	7.39	$7.4^{+3.7}_{-3.7}$	$\langle d^2 \rangle^{1/2}$	2.509	$2.506^{+0.077}_{-0.079}$	$D_A(0.57)$	1384.8	$1406^{+54}_{-41}$
$A_{143}^{\text{dust}TT}$	8.96	$8.9^{+3.6}_{-3.6}$	$z_{\text{re}}$	9.87	$10.4^{+3.1}_{-3.2}$	$F_{\text{AP}}(0.57)$	0.6754	$0.680^{+0.012}_{-0.0095}$
$A_{143 \times 217}^{\text{dust}TT}$	17.8	$17.1^{+8.2}_{-8.1}$	$10^9 A_s$	2.196	$2.22^{+0.15}_{-0.15}$	$f\sigma_8(0.57)$	0.4881	$0.477^{+0.026}_{-0.031}$
$A_{217}^{\text{dust}TT}$	82.2	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8826	$1.883^{+0.023}_{-0.023}$	$\sigma_8(0.57)$	0.627	$0.601^{+0.047}_{-0.063}$
$A_{100}^{\text{dust}EE}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{40}$	1239.0	$1242^{+26}_{-26}$	$f_{2000}^{143}$	29.0	$30^{+6}_{-5}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0487	$0.0487^{+0.0098}_{-0.0098}$	$D_{220}$	5726	$5730^{+76}_{-76}$	$f_{2000}^{143 \times 217}$	32.02	$32^{+4}_{-4}$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.0997^{+0.064}_{-0.064}$	$D_{810}$	2535.9	$2536^{+27}_{-26}$	$f_{2000}^{217}$	105.55	$106.1^{+3.8}_{-3.7}$
$A_{143}^{\text{dust}EE}$	0.1001	$0.100^{+0.013}_{-0.013}$	$D_{1420}$	814.9	$814.8^{+9.3}_{-9.3}$	$\chi_{\text{lowTEB}}^2$	10496.79	$10498.1 (\nu: 3.0)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.224^{+0.091}_{-0.091}$	$D_{2000}$	230.59	$230.3^{+3.2}_{-3.3}$	$\chi_{\text{plik}}^2$	2431.5	$2451.5 (\nu: 24.3)$
$A_{217}^{\text{dust}EE}$	0.651	$0.65^{+0.25}_{-0.25}$	$n_{s,0.002}$	0.9651	$0.9639^{+0.0097}_{-0.0098}$	$\chi_{\text{prior}}^2$	6.7	$19.3 (\nu: 15.3)$
$A_{100}^{\text{dust}TE}$	0.140	$0.141^{+0.074}_{-0.074}$	$Y_P$	0.245342	$0.24532^{+0.00014}_{-0.00015}$	$\chi_{\text{CMB}}^2$	12928.3	$12949.6 (\nu: 23.8)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.058}_{-0.057}$	$Y_P^{\text{BBN}}$	0.246669	$0.24665^{+0.00014}_{-0.00015}$			

Best-fit  $\chi_{\text{eff}}^2 = 12935.02$ ;  $\bar{\chi}_{\text{eff}}^2 = 12968.87$ ;  $R - 1 = 0.00787$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.79 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.52

## 7.6 base\_mnu\_plikHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022275	$0.02226^{+0.00031}_{-0.00031}$	$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.17}_{-0.17}$	$10^5 \text{D/H}$	2.609	$2.612^{+0.059}_{-0.058}$
$\Omega_c h^2$	0.11960	$0.1196^{+0.0028}_{-0.0028}$	$A_{143}^{\text{dust}TE}$	0.155	$0.16^{+0.10}_{-0.11}$	Age/Gyr	13.780	$13.83^{+0.12}_{-0.099}$
$100\theta_{\text{MC}}$	1.04083	$1.04075^{+0.00063}_{-0.00063}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.16}_{-0.16}$	$z_*$	1090.00	$1090.03^{+0.59}_{-0.57}$
$\tau$	0.0789	$0.082^{+0.033}_{-0.034}$	$A_{217}^{\text{dust}TE}$	1.67	$1.67^{+0.51}_{-0.49}$	$r_*$	144.61	$144.62^{+0.61}_{-0.60}$
$\Sigma m_\nu$ [eV]	0.001	< 0.288	$c_{100}$	0.99820	$0.9982^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04099	$1.04097^{+0.00062}_{-0.00061}$
$\ln(10^{10} A_s)$	3.092	$3.099^{+0.065}_{-0.066}$	$c_{217}$	0.99592	$0.9960^{+0.0029}_{-0.0028}$	$D_A/\text{Gpc}$	13.892	$13.893^{+0.057}_{-0.057}$
$n_s$	0.9653	$0.9651^{+0.0093}_{-0.0092}$	$H_0$	67.89	$67.0^{+2.0}_{-2.3}$	$z_{\text{drag}}$	1059.67	$1059.65^{+0.59}_{-0.60}$
$y_{\text{cal}}$	1.00013	$1.0005^{+0.0048}_{-0.0049}$	$\Omega_\Lambda$	0.6922	$0.681^{+0.026}_{-0.030}$	$r_{\text{drag}}$	147.31	$147.32^{+0.59}_{-0.59}$
$A_{217}^{\text{CIB}}$	66.0	$64^{+10}_{-10}$	$\Omega_m$	0.3078	$0.319^{+0.030}_{-0.026}$	$k_D$	0.14056	$0.14054^{+0.00064}_{-0.00064}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.15	—	$\Omega_m h^2$	0.14188	$0.1430^{+0.0035}_{-0.0034}$	$100\theta_D$	0.160889	$0.16090^{+0.00036}_{-0.00035}$
$A_{143}^{\text{tSZ}}$	7.18	$5.4^{+3.6}_{-3.8}$	$\Omega_\nu h^2$	0.00001	< 0.00310	$z_{\text{eq}}$	3390	$3390^{+62}_{-62}$
$A_{100}^{\text{PS}}$	254	$260^{+60}_{-50}$	$\Omega_m h^3$	0.09633	$0.0958^{+0.0011}_{-0.0014}$	$k_{\text{eq}}$	0.010348	$0.01035^{+0.00019}_{-0.00019}$
$A_{143}^{\text{PS}}$	40.1	$43^{+10}_{-20}$	$\sigma_8$	0.8432	$0.824^{+0.041}_{-0.047}$	$100\theta_{\text{eq}}$	0.8150	$0.815^{+0.012}_{-0.012}$
$A_{143 \times 217}^{\text{PS}}$	36.6	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4678	$0.465^{+0.020}_{-0.020}$	$100\theta_{s,\text{eq}}$	0.4504	$0.4505^{+0.0061}_{-0.0060}$
$A_{217}^{\text{PS}}$	99.0	$98^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6281	$0.619^{+0.027}_{-0.028}$	$r_{\text{drag}}/D_V(0.57)$	0.07176	$0.0712^{+0.0014}_{-0.0015}$
$A^{\text{kSZ}}$	0.00	< 7.81	$\sigma_8/h^{0.5}$	1.0233	$1.006^{+0.044}_{-0.047}$	$H(0.57)$	93.19	$92.72^{+0.98}_{-1.1}$
$A_{100}^{\text{dust}TT}$	7.38	$7.4^{+3.7}_{-3.7}$	$\langle d^2 \rangle^{1/2}$	2.510	$2.504^{+0.077}_{-0.079}$	$D_A(0.57)$	1383.4	$1396^{+32}_{-28}$
$A_{143}^{\text{dust}TT}$	8.93	$8.9^{+3.6}_{-3.5}$	$z_{\text{re}}$	10.04	$10.3^{+3.0}_{-3.1}$	$F_{\text{AP}}(0.57)$	0.6751	$0.6778^{+0.0074}_{-0.0066}$
$A_{143 \times 217}^{\text{dust}TT}$	17.5	$17.0^{+8.1}_{-8.0}$	$10^9 A_s$	2.202	$2.22^{+0.15}_{-0.14}$	$f\sigma_8(0.57)$	0.4881	$0.481^{+0.020}_{-0.021}$
$A_{217}^{\text{dust}TT}$	81.9	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8808	$1.881^{+0.023}_{-0.023}$	$\sigma_8(0.57)$	0.6277	$0.611^{+0.033}_{-0.039}$
$A_{100}^{\text{dust}EE}$	0.0811	$0.081^{+0.011}_{-0.011}$	$D_{40}$	1238.9	$1241^{+26}_{-26}$	$f_{2000}^{143}$	29.0	$29^{+5}_{-5}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0488	$0.0488^{+0.0098}_{-0.0096}$	$D_{220}$	5726	$5731^{+76}_{-76}$	$f_{2000}^{143 \times 217}$	31.96	$32^{+4}_{-4}$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.100^{+0.064}_{-0.065}$	$D_{810}$	2534.3	$2536^{+27}_{-27}$	$f_{2000}^{217}$	105.56	$105.8^{+3.7}_{-3.7}$
$A_{143}^{\text{dust}EE}$	0.0999	$0.100^{+0.013}_{-0.013}$	$D_{1420}$	814.5	$815.0^{+9.3}_{-9.4}$	$\chi_{\text{lowTEB}}^2$	10496.97	$10497.9 (\nu: 2.8)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.223^{+0.091}_{-0.092}$	$D_{2000}$	230.51	$230.5^{+3.1}_{-3.2}$	$\chi_{\text{plik}}^2$	2431.2	$2450.9 (\nu: 23.5)$
$A_{217}^{\text{dust}EE}$	0.648	$0.65^{+0.25}_{-0.26}$	$n_{s,0.002}$	0.9653	$0.9651^{+0.0093}_{-0.0092}$	$\chi_{\text{JLA}}^2$	706.65	$707.16 (\nu: 0.3)$
$A_{100}^{\text{dust}TE}$	0.142	$0.142^{+0.074}_{-0.074}$	$Y_P$	0.245351	$0.24534^{+0.00014}_{-0.00014}$	$\chi_{\text{prior}}^2$	6.8	$19.3 (\nu: 15.3)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.057}_{-0.057}$	$Y_P^{\text{BBN}}$	0.246677	$0.24667^{+0.00014}_{-0.00014}$	$\chi_{\text{CMB}}^2$	12928.2	$12948.8 (\nu: 22.6)$

Best-fit  $\chi_{\text{eff}}^2 = 13641.67$ ;  $\bar{\chi}_{\text{eff}}^2 = 13675.28$ ;  $R - 1 = 0.00899$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.97 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.20 SN - JLA December\_2013: 706.65

## 7.7 base\_mnu\_plikHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022299	$0.02226^{+0.00031}_{-0.00031}$	$A_{100 \times 217}^{\text{dustTE}}$	0.305	$0.30^{+0.17}_{-0.17}$	$10^5 \text{D/H}$	2.605	$2.611^{+0.060}_{-0.058}$
$\Omega_c h^2$	0.11940	$0.1196^{+0.0028}_{-0.0028}$	$A_{143}^{\text{dustTE}}$	0.155	$0.16^{+0.10}_{-0.11}$	Age/Gyr	13.776	$13.83^{+0.12}_{-0.10}$
$100\theta_{\text{MC}}$	1.04085	$1.04076^{+0.00064}_{-0.00064}$	$A_{143 \times 217}^{\text{dustTE}}$	0.338	$0.34^{+0.16}_{-0.16}$	$z_*$	1089.95	$1090.02^{+0.60}_{-0.58}$
$\tau$	0.0807	$0.082^{+0.033}_{-0.034}$	$A_{217}^{\text{dustTE}}$	1.66	$1.67^{+0.51}_{-0.49}$	$r_*$	144.65	$144.62^{+0.62}_{-0.62}$
$\Sigma m_\nu [\text{eV}]$	0.000	$< 0.287$	$c_{100}$	0.99819	$0.9982^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04100	$1.04098^{+0.00062}_{-0.00062}$
$\ln(10^{10} A_s)$	3.095	$3.099^{+0.065}_{-0.066}$	$c_{217}$	0.99587	$0.9960^{+0.0029}_{-0.0028}$	$D_A/\text{Gpc}$	13.895	$13.893^{+0.057}_{-0.058}$
$n_s$	0.9664	$0.9651^{+0.0094}_{-0.0093}$	$H_0$	67.99	$67.0^{+2.1}_{-2.3}$	$z_{\text{drag}}$	1059.74	$1059.66^{+0.62}_{-0.61}$
$y_{\text{cal}}$	1.00022	$1.0005^{+0.0048}_{-0.0049}$	$\Omega_\Lambda$	0.6935	$0.682^{+0.027}_{-0.030}$	$r_{\text{drag}}$	147.34	$147.32^{+0.60}_{-0.60}$
$A_{217}^{\text{CIB}}$	65.3	$64^{+10}_{-10}$	$\Omega_m$	0.3065	$0.318^{+0.030}_{-0.027}$	$k_D$	0.14055	$0.14055^{+0.00064}_{-0.00064}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.20	—	$\Omega_m h^2$	0.14170	$0.1429^{+0.0036}_{-0.0035}$	$100\theta_D$	0.160865	$0.16090^{+0.00036}_{-0.00034}$
$A_{143}^{\text{tSZ}}$	7.16	$5.4^{+3.6}_{-3.8}$	$\Omega_\nu h^2$	0.00000	$< 0.00309$	$z_{\text{eq}}$	3386	$3389^{+64}_{-63}$
$A_{100}^{\text{PS}}$	252	$260^{+60}_{-50}$	$\Omega_m h^3$	0.09634	$0.0958^{+0.0011}_{-0.0014}$	$k_{\text{eq}}$	0.010334	$0.01034^{+0.00019}_{-0.00019}$
$A_{143}^{\text{PS}}$	40.2	$43^{+10}_{-20}$	$\sigma_8$	0.8441	$0.824^{+0.041}_{-0.047}$	$100\theta_{\text{eq}}$	0.8159	$0.815^{+0.012}_{-0.012}$
$A_{143 \times 217}^{\text{PS}}$	37.6	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4673	$0.465^{+0.020}_{-0.020}$	$100\theta_{s,\text{eq}}$	0.4508	$0.4505^{+0.0062}_{-0.0061}$
$A_{217}^{\text{PS}}$	99.7	$98^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6281	$0.619^{+0.027}_{-0.028}$	$r_{\text{drag}}/D_V(0.57)$	0.07183	$0.0712^{+0.0014}_{-0.0016}$
$A^{\text{kSZ}}$	0.00	$< 7.80$	$\sigma_8/h^{0.5}$	1.0237	$1.006^{+0.044}_{-0.047}$	$H(0.57)$	93.23	$92.7^{+1.0}_{-1.2}$
$A_{100}^{\text{dustTT}}$	7.43	$7.4^{+3.7}_{-3.7}$	$\langle d^2 \rangle^{1/2}$	2.509	$2.504^{+0.077}_{-0.079}$	$D_A(0.57)$	1382.0	$1396^{+33}_{-29}$
$A_{143}^{\text{dustTT}}$	8.90	$8.9^{+3.6}_{-3.5}$	$z_{\text{re}}$	10.19	$10.3^{+3.0}_{-3.1}$	$F_{\text{AP}}(0.57)$	0.6748	$0.6777^{+0.0076}_{-0.0068}$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.0^{+8.1}_{-8.0}$	$10^9 A_s$	2.210	$2.22^{+0.15}_{-0.14}$	$f\sigma_8(0.57)$	0.4883	$0.482^{+0.020}_{-0.021}$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8802	$1.881^{+0.023}_{-0.023}$	$\sigma_8(0.57)$	0.6287	$0.612^{+0.033}_{-0.039}$
$A_{100}^{\text{dustEE}}$	0.0814	$0.081^{+0.011}_{-0.011}$	$D_{40}$	1237.3	$1241^{+26}_{-26}$	$f_{2000}^{143}$	28.6	$29^{+5}_{-5}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0488	$0.0488^{+0.0098}_{-0.0096}$	$D_{220}$	5725	$5731^{+76}_{-76}$	$f_{2000}^{143 \times 217}$	31.60	$32^{+4}_{-4}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.100^{+0.064}_{-0.065}$	$D_{810}$	2534.8	$2536^{+27}_{-27}$	$f_{2000}^{217}$	105.27	$105.8^{+3.8}_{-3.7}$
$A_{143}^{\text{dustEE}}$	0.1005	$0.100^{+0.013}_{-0.013}$	$D_{1420}$	815.0	$815.0^{+9.3}_{-9.4}$	$\chi_{\text{lowTEB}}^2$	10496.91	$10497.9 (\nu: 2.8)$
$A_{143 \times 217}^{\text{dustEE}}$	0.222	$0.223^{+0.091}_{-0.092}$	$D_{2000}$	230.77	$230.5^{+3.2}_{-3.2}$	$\chi_{\text{plik}}^2$	2431.2	$2450.9 (\nu: 23.5)$
$A_{217}^{\text{dustEE}}$	0.650	$0.65^{+0.25}_{-0.26}$	$n_{s,0.002}$	0.9664	$0.9651^{+0.0094}_{-0.0093}$	$\chi_{\text{H070p6}}^2$	0.62	$1.24 (\nu: 0.3)$
$A_{100}^{\text{dustTE}}$	0.141	$0.142^{+0.074}_{-0.074}$	$Y_P$	0.245362	$0.24534^{+0.00014}_{-0.00015}$	$\chi_{\text{prior}}^2$	6.9	$19.3 (\nu: 15.3)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.132^{+0.058}_{-0.057}$	$Y_P^{\text{BBN}}$	0.246688	$0.24667^{+0.00014}_{-0.00015}$	$\chi_{\text{CMB}}^2$	12928.1	$12948.8 (\nu: 22.6)$

Best-fit  $\chi_{\text{eff}}^2 = 12935.66$ ;  $\bar{\chi}_{\text{eff}}^2 = 12969.37$ ;  $R - 1 = 0.00898$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.91 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.20 Hubble - H070p6: 0.62



## 7.8 base\_mnu\_plikHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00032}_{-0.00033}$	$A_{100 \times 217}^{\text{dust}TE}$	$0.30^{+0.17}_{-0.17}$	$10^5 \text{D/H}$	$2.620^{+0.064}_{-0.060}$
$\Omega_c h^2$	$0.1200^{+0.0029}_{-0.0029}$	$A_{143}^{\text{dust}TE}$	$0.16^{+0.10}_{-0.10}$	Age/Gyr	$13.87^{+0.20}_{-0.15}$
$100\theta_{\text{MC}}$	$1.04068^{+0.00066}_{-0.00067}$	$A_{143 \times 217}^{\text{dust}TE}$	$0.34^{+0.16}_{-0.16}$	$z_*$	$1090.13^{+0.67}_{-0.62}$
$\tau$	$0.083^{+0.033}_{-0.032}$	$A_{217}^{\text{dust}TE}$	$1.68^{+0.51}_{-0.50}$	$r_*$	$144.53^{+0.64}_{-0.66}$
$\Sigma m_\nu$ [eV]	$< 0.494$	$c_{100}$	$0.9982^{+0.0015}_{-0.0015}$	$100\theta_*$	$1.04093^{+0.00062}_{-0.00062}$
$\ln(10^{10} A_s)$	$3.102^{+0.065}_{-0.063}$	$c_{217}$	$0.9960^{+0.0029}_{-0.0028}$	$D_A/\text{Gpc}$	$13.885^{+0.060}_{-0.061}$
$n_s$	$0.9640^{+0.0096}_{-0.0097}$	$H_0$	$66.3^{+2.9}_{-3.7}$	$z_{\text{drag}}$	$1059.60^{+0.61}_{-0.60}$
$y_{\text{cal}}$	$1.0005^{+0.0048}_{-0.0049}$	$\Omega_\Lambda$	$0.672^{+0.039}_{-0.050}$	$r_{\text{drag}}$	$147.24^{+0.63}_{-0.63}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$\Omega_m$	$0.328^{+0.050}_{-0.039}$	$k_D$	$0.14060^{+0.00066}_{-0.00066}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\Omega_m h^2$	$0.1440^{+0.0051}_{-0.0044}$	$100\theta_D$	$0.16092^{+0.00036}_{-0.00035}$
$A_{143}^{\text{tSZ}}$	$5.3^{+3.6}_{-3.8}$	$\Omega_\nu h^2$	$< 0.00531$	$z_{\text{eq}}$	$3398^{+65}_{-65}$
$A_{100}^{\text{PS}}$	$261^{+60}_{-50}$	$\Omega_m h^3$	$0.0954^{+0.0016}_{-0.0023}$	$k_{\text{eq}}$	$0.01037^{+0.00020}_{-0.00020}$
$A_{143}^{\text{PS}}$	$44^{+20}_{-20}$	$\sigma_8$	$0.812^{+0.057}_{-0.075}$	$100\theta_{\text{eq}}$	$0.814^{+0.013}_{-0.012}$
$A_{143 \times 217}^{\text{PS}}$	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	$0.465^{+0.021}_{-0.022}$	$100\theta_{\text{s,eq}}$	$0.4497^{+0.0064}_{-0.0062}$
$A_{217}^{\text{PS}}$	$98^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	$0.614^{+0.034}_{-0.039}$	$r_{\text{drag}}/D_V(0.57)$	$0.0708^{+0.0019}_{-0.0024}$
$A^{\text{kSZ}}$	$< 7.90$	$\sigma_8/h^{0.5}$	$0.997^{+0.057}_{-0.069}$	$H(0.57)$	$92.4^{+1.4}_{-1.8}$
$A_{100}^{\text{dust}TT}$	$7.4^{+3.7}_{-3.7}$	$\langle d^2 \rangle^{1/2}$	$2.507^{+0.076}_{-0.077}$	$D_A(0.57)$	$1406^{+54}_{-41}$
$A_{143}^{\text{dust}TT}$	$8.9^{+3.6}_{-3.6}$	$z_{\text{re}}$	$10.4^{+2.8}_{-3.0}$	$F_{\text{AP}}(0.57)$	$0.680^{+0.012}_{-0.0095}$
$A_{143 \times 217}^{\text{dust}TT}$	$17.0^{+8.1}_{-8.0}$	$10^9 A_s$	$2.22^{+0.14}_{-0.15}$	$f\sigma_8(0.57)$	$0.477^{+0.026}_{-0.031}$
$A_{217}^{\text{dust}TT}$	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.023}_{-0.024}$	$\sigma_8(0.57)$	$0.601^{+0.047}_{-0.063}$
$A_{100}^{\text{dust}EE}$	$0.081^{+0.011}_{-0.011}$	$D_{40}$	$1242^{+26}_{-26}$	$f_{2000}^{143}$	$30^{+6}_{-5}$
$A_{100 \times 143}^{\text{dust}EE}$	$0.0487^{+0.0097}_{-0.0097}$	$D_{220}$	$5730^{+76}_{-76}$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$
$A_{100 \times 217}^{\text{dust}EE}$	$0.0998^{+0.064}_{-0.065}$	$D_{810}$	$2536^{+27}_{-26}$	$f_{2000}^{217}$	$106.1^{+3.8}_{-3.7}$
$A_{143}^{\text{dust}EE}$	$0.100^{+0.013}_{-0.013}$	$D_{1420}$	$814.8^{+9.3}_{-9.3}$	$\chi_{\text{lowTEB}}^2$	$10498.1 (\nu: 3.0)$
$A_{143 \times 217}^{\text{dust}EE}$	$0.223^{+0.091}_{-0.092}$	$D_{2000}$	$230.3^{+3.2}_{-3.3}$	$\chi_{\text{plik}}^2$	$2451.4 (\nu: 24.2)$
$A_{217}^{\text{dust}EE}$	$0.65^{+0.26}_{-0.26}$	$n_{\text{s},0.002}$	$0.9640^{+0.0096}_{-0.0097}$	$\chi_{\text{prior}}^2$	$19.3 (\nu: 15.3)$
$A_{100}^{\text{dust}TE}$	$0.141^{+0.075}_{-0.073}$	$Y_{\text{P}}$	$0.24532^{+0.00014}_{-0.00015}$	$\chi_{\text{CMB}}^2$	$12949.5 (\nu: 23.7)$
$A_{100 \times 143}^{\text{dust}TE}$	$0.132^{+0.058}_{-0.057}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24665^{+0.00014}_{-0.00015}$		

$$\bar{\chi}_{\text{eff}}^2 = 12968.81; R - 1 = 0.00798$$

## 7.9 base\_mnu\_CamSpecHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02228	$0.02215^{+0.00050}_{-0.00055}$ (+0.1 $\sigma$ )	$H_0$	68.10	$65.8^{+4.1}_{-5.5}$ (+0.1 $\sigma$ )	$100\theta_*$	1.04117	$1.04104^{+0.00093}_{-0.00094}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	0.11918	$0.1200^{+0.0046}_{-0.0044}$ (-0.1 $\sigma$ )	$\Omega_\Lambda$	0.695	$0.664^{+0.058}_{-0.079}$ (+0.1 $\sigma$ )	$z_{\text{drag}}$	1059.63	$1059.4^{+1.0}_{-1.0}$ (-0.0 $\sigma$ )
$100\theta_{\text{MC}}$	1.04100	$1.04075^{+0.00099}_{-0.0011}$ (+0.1 $\sigma$ )	$\Omega_m$	0.305	$0.336^{+0.079}_{-0.058}$ (-0.1 $\sigma$ )	$r_{\text{drag}}$	147.42	$147.30^{+0.98}_{-1.0}$ (+0.1 $\sigma$ )
$\tau$	0.0770	$0.080^{+0.038}_{-0.038}$ (-0.0 $\sigma$ )	$\Omega_m h^2$	0.1415	$0.1446^{+0.0079}_{-0.0066}$ (-0.1 $\sigma$ )	$k_D$	0.14046	$0.1405^{+0.0011}_{-0.0010}$ (-0.1 $\sigma$ )
$\Sigma m_\nu$ [eV]	0.000	< 0.676 (-0.0 $\sigma$ )	$\Omega_\nu h^2$	0.00000	< 0.00727 (-0.0 $\sigma$ )	$100\theta_D$	0.16091	$0.16100^{+0.00055}_{-0.00054}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.084	$3.092^{+0.074}_{-0.074}$ (-0.1 $\sigma$ )	$\Omega_m h^3$	0.09634	$0.0950^{+0.0024}_{-0.0033}$ (+0.0 $\sigma$ )	$z_{\text{eq}}$	3380	$3396^{+100}_{-99}$ (-0.1 $\sigma$ )
$n_s$	0.9682	$0.966^{+0.013}_{-0.014}$ (+0.3 $\sigma$ )	$\sigma_8$	0.840	$0.796^{+0.074}_{-0.10}$ (+0.0 $\sigma$ )	$100\theta_{\text{eq}}$	0.8170	$0.814^{+0.019}_{-0.019}$ (+0.1 $\sigma$ )
$y_{\text{cal}}$	1.00019	$1.0003^{+0.0050}_{-0.0048}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4637	$0.460^{+0.027}_{-0.028}$ (-0.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07194	$0.0704^{+0.0028}_{-0.0036}$ (+0.1 $\sigma$ )
$A_{100}^{\text{PS}}$	246.5	$248^{+40}_{-40}$ (-0.4 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6240	$0.605^{+0.043}_{-0.051}$ (-0.0 $\sigma$ )	$H(0.57)$	93.27	$92.1^{+2.0}_{-2.6}$ (+0.1 $\sigma$ )
$A_{143}^{\text{PS}}$	35.1	$40^{+20}_{-20}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	1.018	$0.982^{+0.073}_{-0.091}$ (-0.0 $\sigma$ )	$D_A(0.57)$	1381	$1415^{+81}_{-59}$ (-0.1 $\sigma$ )
$A_{217}^{\text{PS}}$	97.1	$98^{+30}_{-30}$ (+0.0 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.489	$2.487^{+0.092}_{-0.094}$ (-0.2 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6744	$0.682^{+0.019}_{-0.014}$ (-0.1 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.2	$47^{+10}_{-10}$ (-2.7 $\sigma$ )	$z_{\text{re}}$	9.86	$10.2^{+3.5}_{-3.7}$ (-0.0 $\sigma$ )	$f\sigma_8(0.57)$	0.4854	$0.470^{+0.034}_{-0.043}$ (-0.0 $\sigma$ )
$A_{143}^{\text{tSZ}}$	3.59	< 6.55 (-1.0 $\sigma$ )	$10^9 A_s$	2.185	$2.20^{+0.17}_{-0.16}$ (-0.1 $\sigma$ )	$\sigma_8(0.57)$	0.626	$0.588^{+0.062}_{-0.085}$ (+0.0 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.429	$0.51^{+0.22}_{-0.20}$	$10^9 A_s e^{-2\tau}$	1.8735	$1.876^{+0.028}_{-0.027}$ (-0.3 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246262	$0.24620^{+0.00023}_{-0.00024}$ (-3.3 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1227.1	$1229^{+30}_{-29}$ (-0.5 $\sigma$ )	$f_{2000}^{143}$	28.8	$29^{+6}_{-6}$ (-0.4 $\sigma$ )
$A^{\text{kSZ}}$	4.4	—	$D_{220}$	5699	$5695^{+82}_{-80}$ (-0.5 $\sigma$ )	$f_{2000}^{217}$	106.40	$106.9^{+4.3}_{-4.2}$ (+0.2 $\sigma$ )
$A_{100}^{\text{dust}}$	0.984	$0.99^{+0.38}_{-0.38}$	$D_{810}$	2528.9	$2531^{+27}_{-27}$ (-0.3 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.50	$32^{+5}_{-4}$ (-0.3 $\sigma$ )
$A_{143}^{\text{dust}}$	1.020	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	814.0	$814^{+10}_{-9.8}$ (-0.0 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10495.71	$10496.9$ ( $\nu$ : 2.9) (-0.3 $\sigma$ )
$A_{217}^{\text{dust}}$	1.222	$1.21^{+0.23}_{-0.23}$	$n_{\text{s},0.002}$	0.9682	$0.966^{+0.013}_{-0.014}$ (+0.3 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	8044.9	$8060.9$ ( $\nu$ : 18.8)
$A_{143 \times 217}^{\text{dust}}$	0.964	$0.98^{+0.35}_{-0.35}$	$Y_{\text{P}}$	0.244931	$0.24488^{+0.00022}_{-0.00024}$ (-3.3 $\sigma$ )	$\chi_{\text{prior}}^2$	3.5	$8.4$ ( $\nu$ : 6.0) (+0.3 $\sigma$ )
$c_{100}$	0.99670	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	Age/Gyr	13.772	$13.90^{+0.30}_{-0.21}$ (-0.1 $\sigma$ )	$\chi_{\text{CMB}}^2$	18540.6	$18557.8$ ( $\nu$ : 18.4) (+1236.6 $\sigma$ )
$c_{217}$	0.99738	$0.9973^{+0.0035}_{-0.0035}$ (+1.0 $\sigma$ )	$z_*$	1089.94	$1090.2^{+1.1}_{-1.0}$ (-0.1 $\sigma$ )			
$\beta_1^1$	-0.19	$-0.1^{+2.0}_{-1.9}$	$r_*$	144.72	$144.56^{+0.99}_{-1.1}$ (+0.1 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 18544.08$ ;  $\Delta\chi_{\text{eff}}^2 = 7282.54$ ;  $\bar{\chi}_{\text{eff}}^2 = 18566.20$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7282.56$ ;  $R - 1 = 0.01055$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.72 ( $\Delta$  -0.81) CamSpec like\_v9.10CMH\_unified: 8044.86

## 7.10 base\_mnu\_CamSpecHM\_TT\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02225^{+0.00045}_{-0.00043} \quad (+0.0\sigma)$	$H_0$	$67.1^{+2.5}_{-2.9} \quad (+0.0\sigma)$	$100\theta_*$	$1.04117^{+0.00088}_{-0.00090} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1191^{+0.0040}_{-0.0040} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.683^{+0.033}_{-0.037} \quad (+0.1\sigma)$	$z_{\text{drag}}$	$1059.57^{+0.94}_{-0.89} \quad (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04093^{+0.00090}_{-0.00091} \quad (+0.1\sigma)$	$\Omega_m$	$0.317^{+0.037}_{-0.033} \quad (-0.1\sigma)$	$r_{\text{drag}}$	$147.47^{+0.91}_{-0.89} \quad (+0.1\sigma)$
$\tau$	$0.081^{+0.038}_{-0.037} \quad (-0.0\sigma)$	$\Omega_m h^2$	$0.1426^{+0.0046}_{-0.0041} \quad (-0.1\sigma)$	$k_D$	$0.1404^{+0.0010}_{-0.00099} \quad (-0.0\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.325 \quad (+0.0\sigma)$	$\Omega_\nu h^2$	$< 0.00349 \quad (+0.0\sigma)$	$100\theta_D$	$0.16095^{+0.00052}_{-0.00053} \quad (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.092^{+0.073}_{-0.073} \quad (-0.1\sigma)$	$\Omega_m h^3$	$0.0957^{+0.0015}_{-0.0017} \quad (-0.0\sigma)$	$z_{\text{eq}}$	$3377^{+89}_{-89} \quad (-0.1\sigma)$
$n_s$	$0.969^{+0.012}_{-0.011} \quad (+0.3\sigma)$	$\sigma_8$	$0.817^{+0.049}_{-0.056} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.818^{+0.018}_{-0.017} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0004^{+0.0050}_{-0.0048} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.026}_{-0.026} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0713^{+0.0017}_{-0.0020} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$246^{+40}_{-50} \quad (-0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.613^{+0.033}_{-0.034} \quad (-0.1\sigma)$	$H(0.57)$	$92.7^{+1.2}_{-1.4} \quad (+0.0\sigma)$
$A_{143}^{\text{PS}}$	$39^{+20}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.998^{+0.053}_{-0.056} \quad (-0.1\sigma)$	$D_A(0.57)$	$1395^{+41}_{-35} \quad (-0.0\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.481^{+0.089}_{-0.091} \quad (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6773^{+0.0093}_{-0.0084} \quad (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$z_{\text{re}}$	$10.2^{+3.2}_{-3.5} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.477^{+0.024}_{-0.025} \quad (-0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.67 \quad (-1.0\sigma)$	$10^9 A_s$	$2.20^{+0.17}_{-0.16} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.607^{+0.039}_{-0.046} \quad (-0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.21}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.026}_{-0.026} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24625^{+0.00019}_{-0.00019} \quad (-3.9\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1228^{+29}_{-28} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.4\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5698^{+82}_{-79} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.4^{+3.9}_{-4.0} \quad (+0.2\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.39}_{-0.38}$	$D_{810}$	$2530^{+27}_{-26} \quad (-0.2\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.3\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$D_{1420}$	$814.5^{+9.9}_{-10} \quad (-0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.7 \quad (\nu: 2.8) \quad (-0.3\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.22}_{-0.23}$	$n_{s,0.002}$	$0.969^{+0.012}_{-0.011} \quad (+0.3\sigma)$	$\chi_{\text{CamSpec}}^2$	$8060.1 \quad (\nu: 18.1)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.34}$	$Y_{\text{P}}$	$0.24492^{+0.00020}_{-0.00018} \quad (-3.9\sigma)$	$\chi_{\text{JLA}}^2$	$707.17 \quad (\nu: 0.4) \quad (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	Age/Gyr	$13.83^{+0.15}_{-0.13} \quad (-0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 5.8) \quad (+0.3\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0034} \quad (+1.0\sigma)$	$z_*$	$1089.99^{+0.80}_{-0.79} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18556.8 \quad (\nu: 17.1) \quad (+1287.6\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_*$	$144.76^{+0.90}_{-0.89} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 19272.40; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.67; R - 1 = 0.01238$$

### 7.11 base\_mnu\_CamSpecHM\_TT\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02226^{+0.00046}_{-0.00044} \quad (+0.0\sigma)$	$H_0$	$67.2^{+2.7}_{-3.0} \quad (+0.1\sigma)$	$100\theta_*$	$1.04119^{+0.00089}_{-0.00090} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1190^{+0.0041}_{-0.0041} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.684^{+0.035}_{-0.039} \quad (+0.1\sigma)$	$z_{\text{drag}}$	$1059.59^{+0.95}_{-0.92} \quad (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04095^{+0.00093}_{-0.00093} \quad (+0.1\sigma)$	$\Omega_m$	$0.316^{+0.039}_{-0.035} \quad (-0.1\sigma)$	$r_{\text{drag}}$	$147.47^{+0.94}_{-0.93} \quad (+0.1\sigma)$
$\tau$	$0.081^{+0.039}_{-0.037} \quad (-0.0\sigma)$	$\Omega_m h^2$	$0.1425^{+0.0049}_{-0.0044} \quad (-0.1\sigma)$	$k_D$	$0.1404^{+0.0010}_{-0.0010} \quad (-0.1\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.322 \quad (+0.0\sigma)$	$\Omega_\nu h^2$	$< 0.00347 \quad (+0.0\sigma)$	$100\theta_D$	$0.16093^{+0.00052}_{-0.00052} \quad (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.092^{+0.073}_{-0.073} \quad (-0.1\sigma)$	$\Omega_m h^3$	$0.0957^{+0.0015}_{-0.0018} \quad (-0.0\sigma)$	$z_{\text{eq}}$	$3376^{+94}_{-92} \quad (-0.1\sigma)$
$n_s$	$0.969^{+0.012}_{-0.012} \quad (+0.3\sigma)$	$\sigma_8$	$0.818^{+0.049}_{-0.056} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.818^{+0.018}_{-0.017} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0004^{+0.0050}_{-0.0048} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.026}_{-0.026} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0714^{+0.0018}_{-0.0021} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$246^{+40}_{-50} \quad (-0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.613^{+0.033}_{-0.034} \quad (-0.1\sigma)$	$H(0.57)$	$92.8^{+1.3}_{-1.5} \quad (+0.0\sigma)$
$A_{143}^{\text{PS}}$	$39^{+20}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.998^{+0.053}_{-0.056} \quad (-0.1\sigma)$	$D_A(0.57)$	$1394^{+43}_{-37} \quad (-0.0\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.481^{+0.090}_{-0.091} \quad (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6771^{+0.0098}_{-0.0089} \quad (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$z_{\text{re}}$	$10.2^{+3.2}_{-3.6} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.478^{+0.024}_{-0.025} \quad (-0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.68 \quad (-1.0\sigma)$	$10^9 A_s$	$2.20^{+0.17}_{-0.16} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.608^{+0.040}_{-0.046} \quad (-0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.21}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.027}_{-0.027} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24625^{+0.00019}_{-0.00019} \quad (-3.9\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1228^{+29}_{-28} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.4\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5699^{+83}_{-79} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.4^{+3.9}_{-4.0} \quad (+0.2\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.39}_{-0.38}$	$D_{810}$	$2530^{+27}_{-26} \quad (-0.2\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.3\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$D_{1420}$	$814.6^{+9.8}_{-10} \quad (-0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.7 \quad (\nu: 2.9) \quad (-0.3\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.22}_{-0.23}$	$n_{s,0.002}$	$0.969^{+0.012}_{-0.012} \quad (+0.3\sigma)$	$\chi_{\text{CamSpec}}^2$	$8060.2 \quad (\nu: 18.1)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.34}$	$Y_{\text{P}}$	$0.24493^{+0.00020}_{-0.00018} \quad (-3.9\sigma)$	$\chi_{\text{H070p6}}^2$	$1.2 \quad (\nu: 0.5) \quad (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$\text{Age/Gyr}$	$13.83^{+0.15}_{-0.13} \quad (-0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 5.8) \quad (+0.3\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0034} \quad (+1.0\sigma)$	$z_*$	$1089.97^{+0.83}_{-0.82} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18556.9 \quad (\nu: 17.3) \quad (+1284.5\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_*$	$144.77^{+0.95}_{-0.93} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18566.48; \Delta\chi_{\text{eff}}^2 = 7282.67; R - 1 = 0.01382$$

## 7.12 base\_mnu\_CamSpecHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02215^{+0.00050}_{-0.00054} \quad (+0.1\sigma)$	$H_0$	$65.8^{+4.1}_{-5.5} \quad (+0.1\sigma)$	$100\theta_*$	$1.04105^{+0.00092}_{-0.00094} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1199^{+0.0046}_{-0.0044} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.664^{+0.058}_{-0.080} \quad (+0.1\sigma)$	$z_{\text{drag}}$	$1059.4^{+1.0}_{-0.98} \quad (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04075^{+0.00099}_{-0.0011} \quad (+0.1\sigma)$	$\Omega_m$	$0.336^{+0.080}_{-0.058} \quad (-0.1\sigma)$	$r_{\text{drag}}$	$147.30^{+0.97}_{-1.0} \quad (+0.1\sigma)$
$\tau$	$0.081^{+0.035}_{-0.036} \quad (-0.0\sigma)$	$\Omega_m h^2$	$0.1445^{+0.0080}_{-0.0065} \quad (-0.1\sigma)$	$k_D$	$0.1405^{+0.0011}_{-0.0010} \quad (-0.1\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.681 \quad (-0.0\sigma)$	$\Omega_\nu h^2$	$< 0.00732 \quad (-0.0\sigma)$	$100\theta_D$	$0.16100^{+0.00054}_{-0.00054} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.094^{+0.068}_{-0.071} \quad (-0.1\sigma)$	$\Omega_m h^3$	$0.0950^{+0.0024}_{-0.0033} \quad (+0.0\sigma)$	$z_{\text{eq}}$	$3396^{+100}_{-99} \quad (-0.1\sigma)$
$n_s$	$0.966^{+0.013}_{-0.014} \quad (+0.3\sigma)$	$\sigma_8$	$0.797^{+0.074}_{-0.10} \quad (+0.0\sigma)$	$100\theta_{\text{eq}}$	$0.814^{+0.019}_{-0.019} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0048} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.027}_{-0.028} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0705^{+0.0028}_{-0.0036} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-40} \quad (-0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.043}_{-0.051} \quad (-0.0\sigma)$	$H(0.57)$	$92.1^{+2.0}_{-2.7} \quad (+0.1\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.982^{+0.073}_{-0.091} \quad (-0.0\sigma)$	$D_A(0.57)$	$1414^{+81}_{-59} \quad (-0.1\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.489^{+0.091}_{-0.089} \quad (-0.3\sigma)$	$F_{\text{AP}}(0.57)$	$0.682^{+0.019}_{-0.014} \quad (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$z_{\text{re}}$	$10.3^{+3.0}_{-3.5} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.470^{+0.034}_{-0.043} \quad (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.56 \quad (-1.0\sigma)$	$10^9 A_s$	$2.21^{+0.15}_{-0.15} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.589^{+0.062}_{-0.086} \quad (+0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.20}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.027}_{-0.027} \quad (-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24621^{+0.00023}_{-0.00023} \quad (-3.3\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1229^{+30}_{-28} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.4\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5695^{+83}_{-80} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.9^{+4.2}_{-4.1} \quad (+0.2\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.37}$	$D_{810}$	$2531^{+27}_{-26} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-4} \quad (-0.3\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	$814^{+10}_{-9.9} \quad (-0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.9 \quad (\nu: 3.0) \quad (-0.3\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.22}_{-0.22}$	$n_{s,0.002}$	$0.966^{+0.013}_{-0.014} \quad (+0.3\sigma)$	$\chi_{\text{CamSpec}}^2$	$8060.7 \quad (\nu: 18.6)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$Y_{\text{P}}$	$0.24488^{+0.00022}_{-0.00024} \quad (-3.3\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 5.9) \quad (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	Age/Gyr	$13.90^{+0.30}_{-0.21} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18557.6 \quad (\nu: 18.1) \quad (+1243.4\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0034} \quad (+0.9\sigma)$	$z_*$	$1090.2^{+1.1}_{-1.0} \quad (-0.1\sigma)$		
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_*$	$144.57^{+0.99}_{-1.1} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18566.01; \Delta \bar{\chi}_{\text{eff}}^2 = 7282.48; R - 1 = 0.01103$$

### 7.13 base\_mnu\_CamSpecHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022379	$0.02233^{+0.00034}_{-0.00034}$ $(+0.7\sigma)$	$\mathcal{C}_{EE}$	1.0006	$1.0009^{+0.0082}_{-0.0082}$	$z_*$	1089.79	$1089.91^{+0.67}_{-0.61}$ $(-0.7\sigma)$
$\Omega_c h^2$	0.11895	$0.1193^{+0.0029}_{-0.0028}$ $(-0.5\sigma)$	$\beta_1^1$	-0.09	$-0.1^{+2.0}_{-1.9}$	$r_*$	144.70	$144.63^{+0.65}_{-0.66}$ $(+0.3\sigma)$
$100\theta_{MC}$	1.04089	$1.04075^{+0.00063}_{-0.00065}$ $(+0.2\sigma)$	$H_0$	68.23	$66.6^{+2.9}_{-3.7}$ $(+0.2\sigma)$	$100\theta_*$	1.04106	$1.04100^{+0.00059}_{-0.00059}$ $(+0.2\sigma)$
$\tau$	0.0784	$0.080^{+0.035}_{-0.036}$ $(-0.1\sigma)$	$\Omega_\Lambda$	0.6964	$0.676^{+0.038}_{-0.049}$ $(+0.2\sigma)$	$z_{drag}$	1059.86	$1059.79^{+0.69}_{-0.68}$ $(+0.6\sigma)$
$\Sigma m_\nu$ [eV]	0.001	$< 0.491$ $(+0.0\sigma)$	$\Omega_m$	0.3036	$0.324^{+0.049}_{-0.038}$ $(-0.2\sigma)$	$r_{drag}$	147.37	$147.31^{+0.65}_{-0.65}$ $(+0.2\sigma)$
$\ln(10^{10} A_s)$	3.087	$3.092^{+0.068}_{-0.069}$ $(-0.3\sigma)$	$\Omega_m h^2$	0.14134	$0.1434^{+0.0051}_{-0.0045}$ $(-0.2\sigma)$	$k_D$	0.14059	$0.14064^{+0.00069}_{-0.00070}$ $(+0.1\sigma)$
$n_s$	0.9684	$0.9674^{+0.0098}_{-0.0097}$ $(+0.7\sigma)$	$\Omega_\nu h^2$	0.00001	$< 0.00528$ $(+0.0\sigma)$	$100\theta_D$	0.160760	$0.16078^{+0.00038}_{-0.00037}$ $(-0.8\sigma)$
$y_{cal}$	1.00019	$1.0003^{+0.0049}_{-0.0049}$ $(-0.1\sigma)$	$\Omega_m h^3$	0.09644	$0.0955^{+0.0016}_{-0.0022}$ $(+0.1\sigma)$	$z_{eq}$	3377	$3384^{+65}_{-64}$ $(-0.4\sigma)$
$A_{100}^{PS}$	245.0	$245^{+40}_{-40}$ $(-0.6\sigma)$	$\sigma_8$	0.839	$0.806^{+0.058}_{-0.074}$ $(-0.2\sigma)$	$100\theta_{eq}$	0.8177	$0.817^{+0.012}_{-0.012}$ $(+0.5\sigma)$
$A_{143}^{PS}$	34.2	$38^{+10}_{-10}$ $(-0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4625	$0.458^{+0.020}_{-0.021}$ $(-0.6\sigma)$	$r_{drag}/D_V(0.57)$	0.07200	$0.0710^{+0.0020}_{-0.0024}$ $(+0.2\sigma)$
$A_{217}^{PS}$	98.1	$98^{+30}_{-30}$ $(+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.6231	$0.607^{+0.034}_{-0.039}$ $(-0.4\sigma)$	$H(0.57)$	93.35	$92.5^{+1.4}_{-1.9}$ $(+0.2\sigma)$
$A_{217}^{CIB}$	46.4	$46^{+10}_{-10}$ $(-2.8\sigma)$	$\sigma_8/h^{0.5}$	1.016	$0.987^{+0.058}_{-0.069}$ $(-0.3\sigma)$	$D_A(0.57)$	1378.7	$1402^{+53}_{-41}$ $(-0.2\sigma)$
$A_{143}^{tSZ}$	3.76	$< 6.73$ $(-1.1\sigma)$	$\langle d^2 \rangle^{1/2}$	2.489	$2.479^{+0.077}_{-0.079}$ $(-0.7\sigma)$	$F_{AP}(0.57)$	0.6740	$0.679^{+0.012}_{-0.0094}$ $(-0.2\sigma)$
$r_{143 \times 217}^{PS}$	0.426	$0.52^{+0.23}_{-0.21}$	$z_{re}$	9.95	$10.1^{+3.0}_{-3.4}$ $(-0.2\sigma)$	$f\sigma_8(0.57)$	0.4848	$0.473^{+0.026}_{-0.031}$ $(-0.3\sigma)$
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s$	2.191	$2.20^{+0.15}_{-0.15}$ $(-0.3\sigma)$	$\sigma_8(0.57)$	0.626	$0.597^{+0.048}_{-0.062}$ $(-0.1\sigma)$
$A^{kSZ}$	4.2	—	$10^9 A_s e^{-2\tau}$	1.8731	$1.874^{+0.023}_{-0.023}$ $(-0.7\sigma)$	$Y_P^{BBN}$	0.246307	$0.24628^{+0.00014}_{-0.00015}$ $(-4.8\sigma)$
$A_{100}^{dust}$	0.979	$0.98^{+0.38}_{-0.37}$	$D_{40}$	1228.3	$1230^{+25}_{-25}$ $(-1.0\sigma)$	$f_{2000}^{143}$	28.3	$29^{+5}_{-5}$ $(-0.4\sigma)$
$A_{143}^{dust}$	1.026	$1.02^{+0.36}_{-0.36}$	$D_{220}$	5710	$5711^{+76}_{-74}$ $(-0.5\sigma)$	$f_{2000}^{217}$	105.96	$106.2^{+3.8}_{-3.8}$ $(+0.1\sigma)$
$A_{217}^{dust}$	1.233	$1.22^{+0.23}_{-0.23}$	$D_{810}$	2529.1	$2531^{+26}_{-26}$ $(-0.4\sigma)$	$f_{2000}^{143 \times 217}$	30.95	$31^{+4}_{-4}$ $(-0.5\sigma)$
$A_{143 \times 217}^{dust}$	0.981	$0.98^{+0.35}_{-0.35}$	$D_{1420}$	814.5	$815.0^{+9.3}_{-9.3}$ $(+0.0\sigma)$	$\chi_{lowTEB}^2$	10495.89	$10496.7(\nu: 2.4)$ $(-0.6\sigma)$
$c_{100}$	0.99671	$0.9968^{+0.0019}_{-0.0019}$ $(-1.8\sigma)$	$n_{s,0.002}$	0.9684	$0.9674^{+0.0098}_{-0.0097}$ $(+0.7\sigma)$	$\chi_{CamSpec}^2$	12935.4	$12953.3(\nu: 19.1)$
$c_{217}$	0.99727	$0.9971^{+0.0035}_{-0.0034}$ $(+0.7\sigma)$	$Y_P$	0.244976	$0.24496^{+0.00015}_{-0.00014}$ $(-4.8\sigma)$	$\chi_{prior}^2$	3.7	$9.0(\nu: 6.4)$ $(-1.9\sigma)$
$c_{TE}$	1.0035	$1.0047^{+0.0089}_{-0.0088}$	Age/Gyr	13.764	$13.85^{+0.20}_{-0.15}$ $(-0.2\sigma)$	$\chi_{CMB}^2$	23431.3	$23450.0(\nu: 19.1)$ $(+1522.1\sigma)$

Best-fit  $\chi_{eff}^2 = 23435.03$ ;  $\Delta\chi_{eff}^2 = 10500.01$ ;  $\bar{\chi}_{eff}^2 = 23458.95$ ;  $\Delta\bar{\chi}_{eff}^2 = 10490.09$ ;  $R - 1 = 0.00897$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.89 ( $\Delta$  -0.90) CamSpec like\_v9.10CMH\_unified: 12935.43

## 7.14 base\_mnu\_CamSpecHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00032}_{-0.00032} \quad (+0.7\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.04104^{+0.00059}_{-0.00059} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1189^{+0.0027}_{-0.0028} \quad (-0.5\sigma)$	$H_0$	$67.3^{+2.1}_{-2.4} \quad (+0.3\sigma)$	$z_{\text{drag}}$	$1059.84^{+0.63}_{-0.67} \quad (+0.6\sigma)$
$100\theta_{\text{MC}}$	$1.04082^{+0.00060}_{-0.00061} \quad (+0.2\sigma)$	$\Omega_\Lambda$	$0.685^{+0.027}_{-0.030} \quad (+0.3\sigma)$	$r_{\text{drag}}$	$147.38^{+0.62}_{-0.60} \quad (+0.2\sigma)$
$\tau$	$0.080^{+0.034}_{-0.035} \quad (-0.1\sigma)$	$\Omega_m$	$0.315^{+0.030}_{-0.027} \quad (-0.3\sigma)$	$k_D$	$0.14059^{+0.00066}_{-0.00068} \quad (+0.1\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.307 \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1425^{+0.0035}_{-0.0034} \quad (-0.3\sigma)$	$100\theta_D$	$0.16076^{+0.00038}_{-0.00036} \quad (-0.8\sigma)$
$\ln(10^{10} A_s)$	$3.091^{+0.066}_{-0.069} \quad (-0.2\sigma)$	$\Omega_\nu h^2$	$< 0.00330 \quad (+0.1\sigma)$	$z_{\text{eq}}$	$3376^{+62}_{-62} \quad (-0.4\sigma)$
$n_s$	$0.9685^{+0.0094}_{-0.0091} \quad (+0.7\sigma)$	$\Omega_m h^3$	$0.0959^{+0.0012}_{-0.0014} \quad (+0.1\sigma)$	$100\theta_{\text{eq}}$	$0.818^{+0.012}_{-0.012} \quad (+0.5\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0048} \quad (-0.1\sigma)$	$\sigma_8$	$0.817^{+0.044}_{-0.050} \quad (-0.3\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0714^{+0.0014}_{-0.0016} \quad (+0.3\sigma)$
$A_{100}^{\text{PS}}$	$244^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.458^{+0.019}_{-0.019} \quad (-0.6\sigma)$	$H(0.57)$	$92.8^{+1.0}_{-1.2} \quad (+0.2\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-20} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.612^{+0.028}_{-0.029} \quad (-0.5\sigma)$	$D_A(0.57)$	$1392^{+34}_{-29} \quad (-0.3\sigma)$
$A_{217}^{\text{PS}}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$0.996^{+0.046}_{-0.049} \quad (-0.4\sigma)$	$F_{\text{AP}}(0.57)$	$0.6769^{+0.0076}_{-0.0067} \quad (-0.3\sigma)$
$A_{217}^{\text{CIB}}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.478^{+0.076}_{-0.079} \quad (-0.6\sigma)$	$f\sigma_8(0.57)$	$0.477^{+0.021}_{-0.022} \quad (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.81 \quad (-1.1\sigma)$	$z_{\text{re}}$	$10.1^{+3.1}_{-3.3} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.608^{+0.036}_{-0.042} \quad (-0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.21}$	$10^9 A_s$	$2.20^{+0.15}_{-0.15} \quad (-0.2\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24630^{+0.00013}_{-0.00014} \quad (-5.2\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.873^{+0.023}_{-0.023} \quad (-0.7\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.4\sigma)$
$A^{\text{kSZ}}$	—	$D_{40}$	$1229^{+25}_{-25} \quad (-0.9\sigma)$	$f_{2000}^{217}$	$105.9^{+3.7}_{-3.7} \quad (+0.1\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.38}_{-0.38}$	$D_{220}$	$5712^{+76}_{-74} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.5\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$D_{810}$	$2530^{+26}_{-26} \quad (-0.4\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.6 \quad (\nu: 2.3) \quad (-0.6\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	$815.0^{+9.2}_{-9.3} \quad (+0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$12952.8 \quad (\nu: 18.3)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.36}_{-0.35}$	$n_{s,0.002}$	$0.9685^{+0.0094}_{-0.0091} \quad (+0.7\sigma)$	$\chi_{\text{JLA}}^2$	$707.03 \quad (\nu: 0.2) \quad (-0.2\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.7\sigma)$	$Y_{\text{P}}$	$0.24497^{+0.00014}_{-0.00013} \quad (-5.2\sigma)$	$\chi_{\text{prior}}^2$	$9.0 \quad (\nu: 6.5) \quad (-1.9\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0034} \quad (+0.7\sigma)$	$\text{Age/Gyr}$	$13.82^{+0.13}_{-0.10} \quad (-0.2\sigma)$	$\chi_{\text{CMB}}^2$	$23449.4 \quad (\nu: 18.0) \quad (+1563.5\sigma)$
$c_{TE}$	$1.0044^{+0.0088}_{-0.0088}$	$z_*$	$1089.82^{+0.58}_{-0.57} \quad (-0.7\sigma)$		
$c_{EE}$	$1.0009^{+0.0083}_{-0.0083}$	$r_*$	$144.71^{+0.62}_{-0.61} \quad (+0.3\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 24165.43; \Delta\bar{\chi}_{\text{eff}}^2 = 10490.14; R - 1 = 0.00934$$

## 7.15 base\_mnu\_CamSpecHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00032}_{-0.00032} \quad (+0.7\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.04105^{+0.00059}_{-0.00059} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1189^{+0.0028}_{-0.0028} \quad (-0.5\sigma)$	$H_0$	$67.4^{+2.1}_{-2.4} \quad (+0.3\sigma)$	$z_{\text{drag}}$	$1059.86^{+0.65}_{-0.63} \quad (+0.6\sigma)$
$100\theta_{\text{MC}}$	$1.04083^{+0.00060}_{-0.00061} \quad (+0.2\sigma)$	$\Omega_\Lambda$	$0.686^{+0.027}_{-0.031} \quad (+0.3\sigma)$	$r_{\text{drag}}$	$147.38^{+0.62}_{-0.61} \quad (+0.2\sigma)$
$\tau$	$0.080^{+0.034}_{-0.036} \quad (-0.1\sigma)$	$\Omega_m$	$0.314^{+0.031}_{-0.027} \quad (-0.3\sigma)$	$k_D$	$0.14059^{+0.00067}_{-0.00069} \quad (+0.1\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.302 \quad (+0.0\sigma)$	$\Omega_m h^2$	$0.1424^{+0.0036}_{-0.0034} \quad (-0.3\sigma)$	$100\theta_D$	$0.16076^{+0.00038}_{-0.00036} \quad (-0.8\sigma)$
$\ln(10^{10} A_s)$	$3.091^{+0.066}_{-0.069} \quad (-0.2\sigma)$	$\Omega_\nu h^2$	$< 0.00325 \quad (+0.0\sigma)$	$z_{\text{eq}}$	$3376^{+63}_{-62} \quad (-0.4\sigma)$
$n_s$	$0.9686^{+0.0094}_{-0.0092} \quad (+0.7\sigma)$	$\Omega_m h^3$	$0.0959^{+0.0012}_{-0.0014} \quad (+0.1\sigma)$	$100\theta_{\text{eq}}$	$0.818^{+0.012}_{-0.012} \quad (+0.5\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0048} \quad (-0.1\sigma)$	$\sigma_8$	$0.818^{+0.044}_{-0.050} \quad (-0.3\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0715^{+0.0015}_{-0.0016} \quad (+0.3\sigma)$
$A_{100}^{\text{PS}}$	$244^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.458^{+0.019}_{-0.019} \quad (-0.6\sigma)$	$H(0.57)$	$92.9^{+1.0}_{-1.2} \quad (+0.3\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-20} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.612^{+0.028}_{-0.029} \quad (-0.5\sigma)$	$D_A(0.57)$	$1391^{+34}_{-29} \quad (-0.3\sigma)$
$A_{217}^{\text{PS}}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$0.997^{+0.046}_{-0.049} \quad (-0.4\sigma)$	$F_{\text{AP}}(0.57)$	$0.6767^{+0.0077}_{-0.0068} \quad (-0.3\sigma)$
$A_{217}^{\text{CIB}}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.478^{+0.076}_{-0.079} \quad (-0.6\sigma)$	$f\sigma_8(0.57)$	$0.477^{+0.021}_{-0.022} \quad (-0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.82 \quad (-1.1\sigma)$	$z_{\text{re}}$	$10.1^{+3.1}_{-3.3} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.609^{+0.035}_{-0.042} \quad (-0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.22}$	$10^9 A_s$	$2.20^{+0.15}_{-0.15} \quad (-0.2\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24630^{+0.00013}_{-0.00014} \quad (-5.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.873^{+0.023}_{-0.023} \quad (-0.7\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.4\sigma)$
$A^{\text{kSZ}}$	—	$D_{40}$	$1229^{+25}_{-25} \quad (-0.9\sigma)$	$f_{2000}^{217}$	$105.9^{+3.7}_{-3.7} \quad (+0.0\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.38}_{-0.38}$	$D_{220}$	$5712^{+76}_{-74} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.5\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$D_{810}$	$2530^{+26}_{-26} \quad (-0.4\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.6 \quad (\nu: 2.3) \quad (-0.6\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	$815.1^{+9.2}_{-9.4} \quad (+0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$12952.8 \quad (\nu: 18.3)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.36}_{-0.35}$	$n_{\text{s}, 0.002}$	$0.9686^{+0.0094}_{-0.0092} \quad (+0.7\sigma)$	$\chi_{\text{H070p6}}^2$	$1.06 \quad (\nu: 0.3) \quad (-0.2\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.7\sigma)$	$Y_{\text{P}}$	$0.24498^{+0.00014}_{-0.00014} \quad (-5.2\sigma)$	$\chi_{\text{prior}}^2$	$9.0 \quad (\nu: 6.5) \quad (-1.9\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0034} \quad (+0.7\sigma)$	$\text{Age}/\text{Gyr}$	$13.82^{+0.13}_{-0.10} \quad (-0.2\sigma)$	$\chi_{\text{CMB}}^2$	$23449.4 \quad (\nu: 18.0) \quad (+1562.0\sigma)$
$c_{TE}$	$1.0044^{+0.0087}_{-0.0088}$	$z_*$	$1089.81^{+0.59}_{-0.58} \quad (-0.7\sigma)$		
$c_{EE}$	$1.0009^{+0.0083}_{-0.0083}$	$r_*$	$144.71^{+0.63}_{-0.62} \quad (+0.3\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 23459.43; \Delta\bar{\chi}_{\text{eff}}^2 = 10490.05; R - 1 = 0.00904$$



## 7.16 base\_mnu\_CamSpecHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00034}_{-0.00035} \quad (+0.7\sigma)$	$c_{EE}$	$1.0009^{+0.0083}_{-0.0084}$	$z_*$	$1089.90^{+0.67}_{-0.66} \quad (-0.7\sigma)$
$\Omega_c h^2$	$0.1192^{+0.0029}_{-0.0028} \quad (-0.5\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$r_*$	$144.63^{+0.65}_{-0.66} \quad (+0.3\sigma)$
$100\theta_{MC}$	$1.04075^{+0.00063}_{-0.00065} \quad (+0.2\sigma)$	$H_0$	$66.6^{+2.9}_{-3.7} \quad (+0.2\sigma)$	$100\theta_*$	$1.04101^{+0.00059}_{-0.00059} \quad (+0.2\sigma)$
$\tau$	$0.081^{+0.033}_{-0.034} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.676^{+0.038}_{-0.049} \quad (+0.2\sigma)$	$z_{drag}$	$1059.79^{+0.68}_{-0.65} \quad (+0.6\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.489 \quad (+0.0\sigma)$	$\Omega_m$	$0.324^{+0.049}_{-0.038} \quad (-0.2\sigma)$	$r_{drag}$	$147.31^{+0.65}_{-0.64} \quad (+0.2\sigma)$
$\ln(10^{10} A_s)$	$3.093^{+0.064}_{-0.067} \quad (-0.3\sigma)$	$\Omega_m h^2$	$0.1434^{+0.0051}_{-0.0045} \quad (-0.2\sigma)$	$k_D$	$0.14064^{+0.00069}_{-0.00069} \quad (+0.1\sigma)$
$n_s$	$0.9675^{+0.0097}_{-0.0097} \quad (+0.7\sigma)$	$\Omega_\nu h^2$	$< 0.00526 \quad (+0.0\sigma)$	$100\theta_D$	$0.16078^{+0.00039}_{-0.00037} \quad (-0.8\sigma)$
$y_{cal}$	$1.0003^{+0.0049}_{-0.0048} \quad (-0.1\sigma)$	$\Omega_m h^3$	$0.0955^{+0.0017}_{-0.0022} \quad (+0.1\sigma)$	$z_{eq}$	$3383^{+64}_{-65} \quad (-0.4\sigma)$
$A_{100}^{PS}$	$244^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8$	$0.806^{+0.058}_{-0.074} \quad (-0.2\sigma)$	$100\theta_{eq}$	$0.817^{+0.012}_{-0.012} \quad (+0.5\sigma)$
$A_{143}^{PS}$	$39^{+10}_{-10} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.458^{+0.020}_{-0.021} \quad (-0.6\sigma)$	$r_{drag}/D_V(0.57)$	$0.0710^{+0.0020}_{-0.0024} \quad (+0.2\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.034}_{-0.039} \quad (-0.4\sigma)$	$H(0.57)$	$92.5^{+1.4}_{-1.9} \quad (+0.2\sigma)$
$A_{217}^{CIB}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$\sigma_8/h^{0.5}$	$0.987^{+0.058}_{-0.069} \quad (-0.3\sigma)$	$D_A(0.57)$	$1402^{+53}_{-41} \quad (-0.2\sigma)$
$A_{143}^{tSZ}$	$< 6.78 \quad (-1.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.481^{+0.077}_{-0.073} \quad (-0.7\sigma)$	$F_{AP}(0.57)$	$0.679^{+0.012}_{-0.0095} \quad (-0.2\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.21}$	$z_{re}$	$10.2^{+2.9}_{-3.0} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.473^{+0.026}_{-0.031} \quad (-0.3\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s$	$2.21^{+0.14}_{-0.15} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.598^{+0.048}_{-0.062} \quad (-0.1\sigma)$
$A^{kSZ}$	—	$10^9 A_s e^{-2\tau}$	$1.874^{+0.023}_{-0.023} \quad (-0.7\sigma)$	$Y_P^{BBN}$	$0.24629^{+0.00014}_{-0.00015} \quad (-4.8\sigma)$
$A_{100}^{dust}$	$0.98^{+0.38}_{-0.37}$	$D_{40}$	$1230^{+26}_{-25} \quad (-1.0\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.4\sigma)$
$A_{143}^{dust}$	$1.02^{+0.35}_{-0.36}$	$D_{220}$	$5711^{+76}_{-74} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.1^{+3.8}_{-3.8} \quad (+0.0\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$D_{810}$	$2531^{+26}_{-26} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.5\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.36}_{-0.35}$	$D_{1420}$	$815.0^{+9.3}_{-9.4} \quad (+0.0\sigma)$	$\chi_{lowTEB}^2$	$10496.7 (\nu: 2.4) \quad (-0.6\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$n_{s,0.002}$	$0.9675^{+0.0097}_{-0.0097} \quad (+0.7\sigma)$	$\chi_{CamSpec}^2$	$12953.3 (\nu: 19.1)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0034} \quad (+0.7\sigma)$	$Y_P$	$0.24496^{+0.00015}_{-0.00014} \quad (-4.8\sigma)$	$\chi_{prior}^2$	$9.0 (\nu: 6.4) \quad (-1.9\sigma)$
$c_{TE}$	$1.0046^{+0.0089}_{-0.0087}$	$\text{Age/Gyr}$	$13.85^{+0.20}_{-0.15} \quad (-0.2\sigma)$	$\chi_{CMB}^2$	$23450.0 (\nu: 19.1) \quad (+1524.5\sigma)$

$$\bar{\chi}_{eff}^2 = 23458.97; \Delta \bar{\chi}_{eff}^2 = 10490.16; R - 1 = 0.00966$$

## 7.17 base\_mnu\_plikHM\_TE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02238	$0.02223^{+0.00054}_{-0.00054}$	$\sigma_8$	0.798	$0.70^{+0.14}_{-0.15}$	$D_A/\text{Gpc}$	13.927	$13.90^{+0.10}_{-0.10}$
$\Omega_c h^2$	0.11775	$0.1181^{+0.0039}_{-0.0039}$	$\sigma_8 \Omega_m^{0.5}$	0.4425	$0.421^{+0.043}_{-0.045}$	$z_{\text{drag}}$	1059.78	$1059.6^{+1.1}_{-1.0}$
$100\theta_{\text{MC}}$	1.04096	$1.0408^{+0.0010}_{-0.0011}$	$\sigma_8 \Omega_m^{0.25}$	0.594	$0.543^{+0.080}_{-0.087}$	$r_{\text{drag}}$	147.68	$147.5^{+1.0}_{-1.1}$
$\tau$	0.0614	$0.061^{+0.041}_{-0.043}$	$\sigma_8/h^{0.5}$	0.969	$0.88^{+0.14}_{-0.15}$	$k_D$	0.14026	$0.1405^{+0.0013}_{-0.0012}$
$\Sigma m_\nu [\text{eV}]$	0.11	$< 1.36$	$\langle d^2 \rangle^{1/2}$	2.401	$2.39^{+0.11}_{-0.11}$	$100\theta_D$	0.16082	$0.16081^{+0.00064}_{-0.00066}$
$\ln(10^{10} A_s)$	3.047	$3.041^{+0.088}_{-0.085}$	$z_{\text{re}}$	8.36	$8.3^{+3.9}_{-4.5}$	$z_{\text{eq}}$	3349	$3353^{+91}_{-89}$
$n_s$	0.9737	$0.966^{+0.024}_{-0.024}$	$10^9 A_s$	2.106	$2.09^{+0.18}_{-0.19}$	$k_{\text{eq}}$	0.010221	$0.01025^{+0.00028}_{-0.00027}$
$y_{\text{cal}}$	0.99984	$0.99996^{+0.0050}_{-0.0049}$	$10^9 A_s e^{-2\tau}$	1.8625	$1.852^{+0.040}_{-0.040}$	$100\theta_{\text{eq}}$	0.8231	$0.823^{+0.018}_{-0.017}$
$A_{100}^{\text{dustTE}}$	0.141	$0.135^{+0.074}_{-0.073}$	$D_{40}$	1204.6	$1200^{+45}_{-45}$	$100\theta_{s,\text{eq}}$	0.4545	$0.4546^{+0.0091}_{-0.0089}$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.132^{+0.057}_{-0.058}$	$D_{220}$	5680	$5689^{+110}_{-110}$	$r_{\text{drag}}/D_V(0.57)$	0.07180	$0.0691^{+0.0040}_{-0.0044}$
$A_{100 \times 217}^{\text{dustTE}}$	0.298	$0.30^{+0.16}_{-0.16}$	$D_{810}$	2525	$2514^{+53}_{-51}$	$H(0.57)$	93.01	$90.9^{+3.1}_{-3.2}$
$A_{143}^{\text{dustTE}}$	0.154	$0.15^{+0.11}_{-0.10}$	$D_{1420}$	815.4	$810^{+24}_{-24}$	$D_A(0.57)$	1386	$1450^{+110}_{-93}$
$A_{143 \times 217}^{\text{dustTE}}$	0.328	$0.33^{+0.16}_{-0.16}$	$D_{2000}$	230.5	$227.6^{+9.5}_{-9.1}$	$F_{\text{AP}}(0.57)$	0.6751	$0.689^{+0.025}_{-0.021}$
$A_{217}^{\text{dustTE}}$	1.65	$1.65^{+0.50}_{-0.50}$	$n_{s,0.002}$	0.9737	$0.966^{+0.024}_{-0.024}$	$f\sigma_8(0.57)$	0.464	$0.421^{+0.065}_{-0.074}$
$c_{100}$	0.99907	$0.9992^{+0.0019}_{-0.0019}$	$Y_P$	0.245397	$0.24533^{+0.00024}_{-0.00025}$	$\sigma_8(0.57)$	0.595	$0.51^{+0.11}_{-0.12}$
$H_0$	67.8	$63.5^{+6.2}_{-6.9}$	$Y_P^{\text{BBN}}$	0.246724	$0.24666^{+0.00024}_{-0.00025}$	$\chi_{\text{lowTEB}}^2$	10493.34	$10494.5 (\nu: 1.8)$
$\Omega_\Lambda$	0.692	$0.632^{+0.091}_{-0.11}$	$10^5 \text{D}/\text{H}$	2.589	$2.62^{+0.11}_{-0.10}$	$\chi_{\text{plikTE}}^2$	932.2	$939.5 (\nu: 9.3)$
$\Omega_m$	0.308	$0.368^{+0.11}_{-0.091}$	Age/Gyr	13.807	$14.06^{+0.40}_{-0.36}$	$\chi_{\text{prior}}^2$	1.6	$7.9 (\nu: 6.5)$
$\Omega_m h^2$	0.1413	$0.1466^{+0.0098}_{-0.0087}$	$z_*$	1089.71	$1090.1^{+1.1}_{-0.99}$	$\chi_{\text{CMB}}^2$	11425.6	$11434.0 (\nu: 9.5)$
$\Omega_\nu h^2$	0.0012	$< 0.0146$	$r_*$	145.01	$144.8^{+1.0}_{-1.1}$			
$\Omega_m h^3$	0.09578	$0.0930^{+0.0041}_{-0.0046}$	$100\theta_*$	1.04117	$1.04117^{+0.00099}_{-0.0010}$			

Best-fit  $\chi_{\text{eff}}^2 = 11427.17$ ;  $\bar{\chi}_{\text{eff}}^2 = 11441.88$ ;  $R - 1 = 0.00840$

$\chi_{\text{eff}}^2$ : CMB - lowl-SMW\_70-dx11d-2014-10-03.v5c\_Ap: 10493.34 plik-dx11dr2\_HM\_v18\_TE: 932.23

## 7.18 base\_mnu\_plikHM\_EE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02211	$0.0226^{+0.0030}_{-0.0029}$	$\sigma_8$	0.455	$0.50^{+0.27}_{-0.19}$	$100\theta_*$	1.04058	$1.0408^{+0.0024}_{-0.0022}$
$\Omega_c h^2$	0.1163	$0.113^{+0.011}_{-0.011}$	$\sigma_8 \Omega_m^{0.5}$	0.375	$0.373^{+0.077}_{-0.069}$	$D_A/\text{Gpc}$	13.691	$13.74^{+0.25}_{-0.22}$
$100\theta_{\text{MC}}$	1.03986	$1.0403^{+0.0022}_{-0.0021}$	$\sigma_8 \Omega_m^{0.25}$	0.413	$0.43^{+0.14}_{-0.11}$	$z_{\text{drag}}$	1060.5	$1061.2^{+5.6}_{-5.5}$
$\tau$	0.0655	$0.065^{+0.040}_{-0.040}$	$\sigma_8/h^{0.5}$	0.644	$0.68^{+0.26}_{-0.19}$	$r_{\text{drag}}$	145.13	$145.6^{+2.2}_{-2.0}$
$\Sigma m_\nu [\text{eV}]$	2.84	—	$\langle d^2 \rangle^{1/2}$	2.511	$2.47^{+0.22}_{-0.23}$	$k_D$	0.14403	$0.1436^{+0.0033}_{-0.0035}$
$\ln(10^{10} A_s)$	3.066	$3.064^{+0.088}_{-0.086}$	$z_{\text{re}}$	9.28	$8.9^{+4.2}_{-4.4}$	$100\theta_D$	0.15932	$0.1592^{+0.0032}_{-0.0028}$
$n_s$	0.9529	$0.960^{+0.040}_{-0.035}$	$10^9 A_s$	2.146	$2.14^{+0.19}_{-0.18}$	$z_{\text{eq}}$	3309	$3248^{+240}_{-250}$
$y_{\text{cal}}$	1.00010	$1.0001^{+0.0048}_{-0.0049}$	$10^9 A_s e^{-2\tau}$	1.883	$1.880^{+0.058}_{-0.063}$	$k_{\text{eq}}$	0.01027	$0.01008^{+0.00064}_{-0.00057}$
$A_{100}^{\text{dustEE}}$	0.0821	$0.082^{+0.012}_{-0.012}$	$D_{40}$	1173	$1180^{+76}_{-71}$	$100\theta_{\text{eq}}$	0.842	$0.855^{+0.065}_{-0.061}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0495	$0.050^{+0.010}_{-0.011}$	$D_{220}$	5749	$5782^{+520}_{-570}$	$100\theta_{s,\text{eq}}$	0.4650	$0.472^{+0.035}_{-0.031}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.099^{+0.063}_{-0.063}$	$D_{810}$	2587	$2587^{+85}_{-88}$	$r_{\text{drag}}/D_V(0.57)$	0.0606	$0.0631^{+0.010}_{-0.0075}$
$A_{143}^{\text{dustEE}}$	0.1007	$0.101^{+0.014}_{-0.014}$	$D_{1420}$	842.0	$842^{+41}_{-43}$	$H(0.57)$	85.7	$87.4^{+7.2}_{-4.6}$
$A_{143 \times 217}^{\text{dustEE}}$	0.225	$0.224^{+0.093}_{-0.092}$	$D_{2000}$	236.2	$237^{+16}_{-17}$	$D_A(0.57)$	1671	$1610^{+200}_{-300}$
$A_{217}^{\text{dustEE}}$	0.646	$0.65^{+0.26}_{-0.26}$	$n_{s,0.002}$	0.9529	$0.960^{+0.040}_{-0.035}$	$F_{\text{AP}}(0.57)$	0.750	$0.734^{+0.063}_{-0.070}$
$H_0$	49.9	$54^{+20}_{-10}$	$Y_P$	0.24527	$0.2455^{+0.0013}_{-0.0012}$	$f\sigma_8(0.57)$	0.293	$0.32^{+0.14}_{-0.11}$
$\Omega_\Lambda$	0.321	$0.39^{+0.39}_{-0.41}$	$Y_P^{\text{BBN}}$	0.24660	$0.2468^{+0.0013}_{-0.0012}$	$\sigma_8(0.57)$	0.307	$0.35^{+0.23}_{-0.16}$
$\Omega_m$	0.679	$0.61^{+0.41}_{-0.39}$	$10^5 \text{D}/\text{H}$	2.64	$2.57^{+0.55}_{-0.53}$	$\chi^2_{\text{lowTEB}}$	10493.39	$10494.5 (\nu: 2.4)$
$\Omega_m h^2$	0.1690	$0.163^{+0.022}_{-0.027}$	Age/Gyr	14.81	$14.60^{+0.80}_{-0.99}$	$\chi^2_{\text{plikEE}}$	751.4	$759.0 (\nu: 10.1)$
$\Omega_\nu h^2$	0.0305	$< 0.0520$	$z_*$	1091.6	$1090.7^{+5.2}_{-5.1}$	$\chi^2_{\text{prior}}$	3.9	$8.2 (\nu: 6.2)$
$\Omega_m h^3$	0.0843	$0.087^{+0.012}_{-0.010}$	$r_*$	142.46	$143.1^{+2.5}_{-2.1}$	$\chi^2_{\text{CMB}}$	11244.8	$11253.6 (\nu: 10.6)$

Best-fit  $\chi^2_{\text{eff}} = 11248.67$ ;  $\bar{\chi}^2_{\text{eff}} = 11261.82$ ;  $R - 1 = 0.00732$

$\chi^2_{\text{eff}}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10493.39 plik\_dx11dr2\_HM\_v18\_EE: 751.39

## 7.19 base\_mnu\_CamSpecHM\_TE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02241	$0.02225^{+0.00053}_{-0.00053}$ (+0.1 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.598	$0.542^{+0.078}_{-0.087}$ (−0.0 $\sigma$ )	$r_{\text{drag}}$	148.05	$147.9^{+1.1}_{-1.1}$ (+0.8 $\sigma$ )
$\Omega_c h^2$	0.11630	$0.1166^{+0.0039}_{-0.0039}$ (−0.7 $\sigma$ )	$\sigma_8/h^{0.5}$	0.980	$0.88^{+0.13}_{-0.15}$ (+0.0 $\sigma$ )	$k_D$	0.13990	$0.1401^{+0.0014}_{-0.0012}$ (−0.7 $\sigma$ )
$100\theta_{\text{MC}}$	1.04134	$1.04108^{+0.00099}_{-0.0010}$ (+0.6 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.381	$2.36^{+0.11}_{-0.11}$ (−0.6 $\sigma$ )	$100\theta_D$	0.16087	$0.16089^{+0.00064}_{-0.00063}$ (+0.2 $\sigma$ )
$\tau$	0.0644	$0.064^{+0.041}_{-0.041}$ (+0.2 $\sigma$ )	$z_{\text{re}}$	8.59	$8.6^{+4.0}_{-4.3}$ (+0.1 $\sigma$ )	$z_{\text{eq}}$	3315	$3318^{+89}_{-89}$ (−0.8 $\sigma$ )
$\Sigma m_\nu$ [eV]	0.01	< 1.30 (−0.1 $\sigma$ )	$10^9 A_s$	2.100	$2.09^{+0.20}_{-0.18}$ (−0.0 $\sigma$ )	$100\theta_{\text{eq}}$	0.8297	$0.830^{+0.018}_{-0.017}$ (+0.7 $\sigma$ )
$\ln(10^{10} A_s)$	3.045	$3.039^{+0.092}_{-0.091}$ (−0.0 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.846	$1.836^{+0.055}_{-0.054}$ (−0.8 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07292	$0.0699^{+0.0040}_{-0.0046}$ (+0.4 $\sigma$ )
$n_s$	0.9823	$0.974^{+0.024}_{-0.025}$ (+0.6 $\sigma$ )	$D_{40}$	1178.6	$1178^{+48}_{-48}$ (−1.0 $\sigma$ )	$H(0.57)$	93.76	$91.3^{+3.0}_{-3.4}$ (+0.3 $\sigma$ )
$y_{\text{cal}}$	0.99999	$1.0000^{+0.0048}_{-0.0048}$ (+0.0 $\sigma$ )	$D_{220}$	5622	$5633^{+160}_{-150}$ (−1.0 $\sigma$ )	$D_A(0.57)$	1365	$1434^{+110}_{-90}$ (−0.3 $\sigma$ )
$c_{TE}$	0.9984	$0.998^{+0.019}_{-0.020}$	$D_{810}$	2514	$2501^{+75}_{-74}$ (−0.5 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6702	$0.685^{+0.026}_{-0.020}$ (−0.3 $\sigma$ )
$H_0$	69.3	$64.6^{+6.1}_{-7.2}$ (+0.3 $\sigma$ )	$D_{1420}$	814.8	$809^{+30}_{-29}$ (−0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.467	$0.422^{+0.063}_{-0.075}$ (+0.0 $\sigma$ )
$\Omega_\Lambda$	0.711	$0.649^{+0.085}_{-0.11}$ (+0.3 $\sigma$ )	$n_{s,0.002}$	0.9823	$0.974^{+0.024}_{-0.025}$ (+0.6 $\sigma$ )	$\sigma_8(0.57)$	0.612	$0.52^{+0.11}_{-0.13}$ (+0.1 $\sigma$ )
$\Omega_m$	0.289	$0.351^{+0.11}_{-0.085}$ (−0.3 $\sigma$ )	$Y_P$	0.244988	$0.24492^{+0.00023}_{-0.00023}$ (−3.2 $\sigma$ )	$Y_P^{\text{BBN}}$	0.246319	$0.24625^{+0.00022}_{-0.00023}$ (−3.2 $\sigma$ )
$\Omega_m h^2$	0.1388	$0.145^{+0.010}_{-0.0085}$ (−0.4 $\sigma$ )	Age/Gyr	13.738	$14.01^{+0.41}_{-0.34}$ (−0.2 $\sigma$ )	$\chi^2_{\text{lowTEB}}$	10492.14	10493.3 ( $\nu$ : 1.2) (−0.6 $\sigma$ )
$\Omega_\nu h^2$	0.0001	< 0.0140 (−0.1 $\sigma$ )	$z_*$	1089.53	$1089.9^{+1.1}_{-1.0}$ (−0.4 $\sigma$ )	$\chi^2_{\text{CamSpec}}$	2694.6	2700.4 ( $\nu$ : 5.7)
$\Omega_m h^3$	0.09624	$0.0932^{+0.0039}_{-0.0046}$ (+0.1 $\sigma$ )	$r_*$	145.38	$145.2^{+1.0}_{-1.1}$ (+0.8 $\sigma$ )	$\chi^2_{\text{prior}}$	10.05	12.0 ( $\nu$ : 1.9) (+1.2 $\sigma$ )
$\sigma_8$	0.816	$0.71^{+0.14}_{-0.15}$ (+0.1 $\sigma$ )	$100\theta_*$	1.04151	$1.04147^{+0.00093}_{-0.00094}$ (+0.6 $\sigma$ )	$\chi^2_{\text{CMB}}$	13186.8	13193.7 ( $\nu$ : 6.7) (+403.0 $\sigma$ )
$\sigma_8 \Omega_m^{0.5}$	0.4386	$0.415^{+0.041}_{-0.045}$ (−0.3 $\sigma$ )	$z_{\text{drag}}$	1059.74	$1059.5^{+1.1}_{-1.0}$ (−0.2 $\sigma$ )			

Best-fit  $\chi^2_{\text{eff}} = 13196.84$ ;  $\Delta\chi^2_{\text{eff}} = 1769.67$ ;  $\bar{\chi}^2_{\text{eff}} = 13205.69$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 1763.81$ ;  $R - 1 = 0.00735$

$\chi^2_{\text{eff}}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10492.14 ( $\Delta$  -1.20) CamSpec like\_v9.10CMH\_unified: 2694.65

## 7.20 base\_mnu\_CamSpecHM\_EE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02185	$0.0229^{+0.0025}_{-0.0023}$ (+0.2 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.425	$0.46^{+0.13}_{-0.11}$ (+0.4 $\sigma$ )	$r_{\text{drag}}$	144.58	$145.3^{+2.0}_{-1.8}$ (−0.3 $\sigma$ )
$\Omega_c h^2$	0.1197	$0.1164^{+0.0097}_{-0.0088}$ (+0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	0.660	$0.73^{+0.23}_{-0.20}$ (+0.4 $\sigma$ )	$k_D$	0.14439	$0.1439^{+0.0030}_{-0.0029}$ (+0.2 $\sigma$ )
$100\theta_{\text{MC}}$	1.03965	$1.0398^{+0.0018}_{-0.0016}$ (−0.4 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.546	$2.47^{+0.21}_{-0.20}$ (−0.0 $\sigma$ )	$100\theta_D$	0.15958	$0.1590^{+0.0025}_{-0.0023}$ (−0.1 $\sigma$ )
$\tau$	0.0603	$0.061^{+0.037}_{-0.039}$ (−0.2 $\sigma$ )	$z_{\text{re}}$	8.86	$8.4^{+4.0}_{-4.2}$ (−0.2 $\sigma$ )	$z_{\text{eq}}$	3383	$3328^{+190}_{-210}$ (+0.6 $\sigma$ )
$\Sigma m_\nu$ [eV]	2.83	—	$10^9 A_s$	2.116	$2.13^{+0.18}_{-0.17}$ (−0.2 $\sigma$ )	$100\theta_{\text{eq}}$	0.827	$0.837^{+0.055}_{-0.046}$ (−0.6 $\sigma$ )
$\ln(10^{10} A_s)$	3.052	$3.056^{+0.081}_{-0.083}$ (−0.2 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.876	$1.880^{+0.058}_{-0.062}$ (+0.0 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.0600	$0.0640^{+0.0093}_{-0.0075}$ (+0.2 $\sigma$ )
$n_s$	0.9428	$0.955^{+0.033}_{-0.031}$ (−0.3 $\sigma$ )	$D_{40}$	1183	$1204^{+67}_{-69}$ (+0.6 $\sigma$ )	$H(0.57)$	85.6	$88.2^{+6.3}_{-4.6}$ (+0.3 $\sigma$ )
$y_{\text{cal}}$	1.00004	$1.0001^{+0.0050}_{-0.0049}$ (+0.0 $\sigma$ )	$D_{220}$	5681	$5828^{+450}_{-480}$ (+0.2 $\sigma$ )	$D_A(0.57)$	1687	$1576^{+200}_{-300}$ (−0.2 $\sigma$ )
$c_{EE}$	0.9963	$0.997^{+0.019}_{-0.019}$	$D_{810}$	2559	$2569^{+84}_{-82}$ (−0.4 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.756	$0.726^{+0.065}_{-0.066}$ (−0.2 $\sigma$ )
$H_0$	48.9	$56^{+20}_{-10}$ (+0.2 $\sigma$ )	$D_{1420}$	828.7	$834^{+36}_{-36}$ (−0.4 $\sigma$ )	$f\sigma_8(0.57)$	0.297	$0.34^{+0.12}_{-0.11}$ (+0.4 $\sigma$ )
$\Omega_\Lambda$	0.280	$> 0.0635$ (+0.2 $\sigma$ )	$n_{s,0.002}$	0.9428	$0.955^{+0.033}_{-0.031}$ (−0.3 $\sigma$ )	$\sigma_8(0.57)$	0.309	$0.39^{+0.20}_{-0.16}$ (+0.3 $\sigma$ )
$\Omega_m$	0.720	$< 0.937$ (−0.2 $\sigma$ )	$Y_P$	0.24476	$0.24516^{+0.00099}_{-0.0010}$ (−0.5 $\sigma$ )	$Y_P^{\text{BBN}}$	0.24607	$0.2465^{+0.0010}_{-0.0010}$ (−0.5 $\sigma$ )
$\Omega_m h^2$	0.1720	$0.161^{+0.022}_{-0.024}$ (−0.2 $\sigma$ )	Age/Gyr	14.84	$14.46^{+0.75}_{-0.86}$ (−0.3 $\sigma$ )	$\chi^2_{\text{lowTEB}}$	10494.60	$10495.6$ ( $\nu$ : 2.7) (+0.5 $\sigma$ )
$\Omega_\nu h^2$	0.0305	$< 0.0489$ (−0.3 $\sigma$ )	$z_*$	1092.21	$1090.2^{+4.5}_{-4.5}$ (−0.2 $\sigma$ )	$\chi^2_{\text{CamSpec}}$	2186.8	$2192.2$ ( $\nu$ : 7.0)
$\Omega_m h^3$	0.0841	$0.089^{+0.011}_{-0.010}$ (+0.3 $\sigma$ )	$r_*$	141.85	$142.9^{+2.2}_{-2.0}$ (−0.2 $\sigma$ )	$\chi^2_{\text{prior}}$	10.17	$12.1$ ( $\nu$ : 2.1) (+1.1 $\sigma$ )
$\sigma_8$	0.461	$0.55^{+0.25}_{-0.20}$ (+0.3 $\sigma$ )	$100\theta_*$	1.04039	$1.0403^{+0.0020}_{-0.0018}$ (−0.5 $\sigma$ )	$\chi^2_{\text{CMB}}$	12681.4	$12687.9$ ( $\nu$ : 6.2) (+311.4 $\sigma$ )
$\sigma_8 \Omega_m^{0.5}$	0.391	$0.389^{+0.065}_{-0.061}$ (+0.4 $\sigma$ )	$z_{\text{drag}}$	1060.09	$1061.7^{+4.5}_{-4.2}$ (+0.2 $\sigma$ )			

Best-fit  $\chi^2_{\text{eff}} = 12691.56$ ;  $\Delta\chi^2_{\text{eff}} = 1442.89$ ;  $\bar{\chi}^2_{\text{eff}} = 12699.93$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 1438.11$ ;  $R - 1 = 0.02740$

$\chi^2_{\text{eff}}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.60 ( $\Delta$  1.21) CamSpec like\_v9.10CMH\_unified: 2186.79

## 7.21 base\_mnu\_plikHM\_TE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02226	$0.02210^{+0.00056}_{-0.00057}$	$\sigma_8$	0.797	$0.69^{+0.14}_{-0.16}$	$D_A/\text{Gpc}$	13.914	$13.89^{+0.10}_{-0.11}$
$\Omega_c h^2$	0.11860	$0.1192^{+0.0042}_{-0.0041}$	$\sigma_8 \Omega_m^{0.5}$	0.4433	$0.422^{+0.043}_{-0.046}$	$z_{\text{drag}}$	1059.59	$1059.4^{+1.1}_{-1.1}$
$100\theta_{\text{MC}}$	1.04103	$1.0407^{+0.0011}_{-0.0011}$	$\sigma_8 \Omega_m^{0.25}$	0.594	$0.540^{+0.081}_{-0.090}$	$r_{\text{drag}}$	147.59	$147.3^{+1.1}_{-1.2}$
$\tau$	0.0505	$< 0.0831$	$\sigma_8/h^{0.5}$	0.969	$0.87^{+0.14}_{-0.16}$	$k_D$	0.14026	$0.1406^{+0.0014}_{-0.0014}$
$\Sigma m_\nu [\text{eV}]$	0.08	$< 1.49$	$\langle d^2 \rangle^{1/2}$	2.407	$2.40^{+0.12}_{-0.11}$	$100\theta_D$	0.16098	$0.16094^{+0.00066}_{-0.00066}$
$\ln(10^{10} A_s)$	3.026	$3.024^{+0.079}_{-0.084}$	$z_{\text{re}}$	7.29	$7.4^{+3.8}_{-4.4}$	$z_{\text{eq}}$	3366	$3375^{+94}_{-92}$
$n_s$	0.9646	$0.954^{+0.027}_{-0.029}$	$10^9 A_s$	2.061	$2.06^{+0.16}_{-0.17}$	$k_{\text{eq}}$	0.010273	$0.01032^{+0.00029}_{-0.00029}$
$y_{\text{cal}}$	0.99990	$1.0000^{+0.0049}_{-0.0049}$	$10^9 A_s e^{-2\tau}$	1.8630	$1.854^{+0.040}_{-0.039}$	$100\theta_{\text{eq}}$	0.8196	$0.819^{+0.018}_{-0.018}$
$A_{100}^{\text{dustTE}}$	0.137	$0.137^{+0.075}_{-0.074}$	$D_{40}$	1222	$1223^{+54}_{-52}$	$100\theta_{s,\text{eq}}$	0.4528	$0.4524^{+0.0093}_{-0.0091}$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.132^{+0.058}_{-0.057}$	$D_{220}$	5699	$5717^{+120}_{-120}$	$r_{\text{drag}}/D_V(0.57)$	0.07174	$0.0687^{+0.0043}_{-0.0048}$
$A_{100 \times 217}^{\text{dustTE}}$	0.314	$0.30^{+0.17}_{-0.16}$	$D_{810}$	2517	$2505^{+52}_{-51}$	$H(0.57)$	93.01	$90.6^{+3.2}_{-3.4}$
$A_{143}^{\text{dustTE}}$	0.156	$0.15^{+0.11}_{-0.10}$	$D_{1420}$	808.7	$802^{+25}_{-24}$	$D_A(0.57)$	1387	$1459^{+120}_{-100}$
$A_{143 \times 217}^{\text{dustTE}}$	0.327	$0.33^{+0.16}_{-0.16}$	$D_{2000}$	227.8	$224.5^{+9.7}_{-9.5}$	$F_{\text{AP}}(0.57)$	0.6755	$0.692^{+0.029}_{-0.024}$
$A_{217}^{\text{dustTE}}$	1.71	$1.66^{+0.50}_{-0.51}$	$n_{s,0.002}$	0.9646	$0.954^{+0.027}_{-0.029}$	$f\sigma_8(0.57)$	0.463	$0.417^{+0.068}_{-0.079}$
$c_{100}$	0.99919	$0.9993^{+0.0020}_{-0.0019}$	$Y_P$	0.245345	$0.24527^{+0.00025}_{-0.00026}$	$\sigma_8(0.57)$	0.594	$0.51^{+0.12}_{-0.13}$
$H_0$	67.7	$62.9^{+6.6}_{-7.6}$	$Y_P^{\text{BBN}}$	0.246672	$0.24659^{+0.00025}_{-0.00027}$	$\chi_{\text{lowEB}}^2$	5430.81	$5431.7 (\nu: 0.7)$
$\Omega_\Lambda$	0.691	$0.62^{+0.10}_{-0.13}$	$10^5 \text{D}/\text{H}$	2.612	$2.64^{+0.11}_{-0.11}$	$\chi_{\text{plikTE}}^2$	931.7	$939.1 (\nu: 8.6)$
$\Omega_m$	0.309	$0.38^{+0.13}_{-0.10}$	Age/Gyr	13.804	$14.09^{+0.44}_{-0.38}$	$\chi_{\text{prior}}^2$	1.4	$7.8 (\nu: 6.6)$
$\Omega_m h^2$	0.1417	$0.148^{+0.011}_{-0.0095}$	$z_*$	1089.93	$1090.4^{+1.2}_{-1.2}$	$\chi_{\text{CMB}}^2$	6362.5	$6370.8 (\nu: 9.3)$
$\Omega_\nu h^2$	0.0009	$< 0.0160$	$r_*$	144.88	$144.6^{+1.1}_{-1.2}$			
$\Omega_m h^3$	0.09593	$0.0928^{+0.0043}_{-0.0050}$	$100\theta_*$	1.04124	$1.04108^{+0.00098}_{-0.0010}$			

Best-fit  $\chi_{\text{eff}}^2 = 6363.89$ ;  $\bar{\chi}_{\text{eff}}^2 = 6378.66$ ;  $R - 1 = 0.01125$

$\chi_{\text{eff}}^2$ : CMB - lowl-QU-70-dx11d-2014-10-03-v5c-Ap: 5430.81 plik-dx11dr2-HM-v18-TE: 931.65

## 7.22 base\_mnu\_plikHM\_EE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02413	$0.0225^{+0.0028}_{-0.0027}$	$\sigma_8$	0.810	$0.52^{+0.28}_{-0.20}$	$100\theta_*$	1.03976	$1.0407^{+0.0026}_{-0.0024}$
$\Omega_c h^2$	0.1140	$0.115^{+0.012}_{-0.010}$	$\sigma_8 \Omega_m^{0.5}$	0.423	$0.383^{+0.078}_{-0.070}$	$D_A/\text{Gpc}$	13.911	$13.71^{+0.26}_{-0.23}$
$100\theta_{\text{MC}}$	1.03978	$1.0401^{+0.0023}_{-0.0021}$	$\sigma_8 \Omega_m^{0.25}$	0.586	$0.44^{+0.15}_{-0.12}$	$z_{\text{drag}}$	1063.5	$1061.2^{+5.2}_{-4.8}$
$\tau$	0.0643	$0.055^{+0.036}_{-0.040}$	$\sigma_8/h^{0.5}$	0.961	$0.70^{+0.27}_{-0.20}$	$r_{\text{drag}}$	146.75	$145.2^{+2.4}_{-2.2}$
$\Sigma m_\nu [\text{eV}]$	0.00	—	$\langle d^2 \rangle^{1/2}$	2.401	$2.50^{+0.23}_{-0.23}$	$k_D$	0.14243	$0.1440^{+0.0034}_{-0.0035}$
$\ln(10^{10} A_s)$	3.076	$3.049^{+0.084}_{-0.084}$	$z_{\text{re}}$	8.15	$7.8^{+3.9}_{-4.4}$	$100\theta_D$	0.15856	$0.1592^{+0.0030}_{-0.0026}$
$n_s$	0.9764	$0.947^{+0.044}_{-0.042}$	$10^9 A_s$	2.167	$2.11^{+0.18}_{-0.17}$	$z_{\text{eq}}$	3301	$3294^{+250}_{-250}$
$y_{\text{cal}}$	0.99984	$1.0000^{+0.0049}_{-0.0048}$	$10^9 A_s e^{-2\tau}$	1.905	$1.891^{+0.060}_{-0.061}$	$k_{\text{eq}}$	0.01008	$0.01022^{+0.00066}_{-0.00057}$
$A_{100}^{\text{dustEE}}$	0.0814	$0.080^{+0.012}_{-0.012}$	$D_{40}$	1251	$1214^{+85}_{-83}$	$100\theta_{\text{eq}}$	0.836	$0.846^{+0.063}_{-0.059}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0484	$0.047^{+0.011}_{-0.011}$	$D_{220}$	6041	$5829^{+500}_{-540}$	$100\theta_{s,\text{eq}}$	0.4597	$0.467^{+0.034}_{-0.031}$
$A_{100 \times 217}^{\text{dustEE}}$	0.096	$0.099^{+0.063}_{-0.063}$	$D_{810}$	2593	$2585^{+84}_{-84}$	$r_{\text{drag}}/D_V(0.57)$	0.0735	$0.0629^{+0.010}_{-0.0077}$
$A_{143}^{\text{dustEE}}$	0.1001	$0.098^{+0.014}_{-0.014}$	$D_{1420}$	842.7	$836^{+41}_{-41}$	$H(0.57)$	95.0	$87.5^{+7.1}_{-4.6}$
$A_{143 \times 217}^{\text{dustEE}}$	0.220	$0.225^{+0.091}_{-0.091}$	$D_{2000}$	240.9	$235^{+16}_{-16}$	$D_A(0.57)$	1339	$1612^{+200}_{-300}$
$A_{217}^{\text{dustEE}}$	0.654	$0.65^{+0.25}_{-0.26}$	$n_{s,0.002}$	0.9764	$0.947^{+0.044}_{-0.042}$	$F_{\text{AP}}(0.57)$	0.666	$0.737^{+0.066}_{-0.071}$
$H_0$	71.1	$54^{+20}_{-10}$	$Y_P$	0.24613	$0.2454^{+0.0012}_{-0.0011}$	$f\sigma_8(0.57)$	0.459	$0.32^{+0.14}_{-0.11}$
$\Omega_\Lambda$	0.727	$0.37^{+0.40}_{-0.44}$	$Y_P^{\text{BBN}}$	0.24746	$0.2468^{+0.0012}_{-0.0011}$	$\sigma_8(0.57)$	0.612	$0.36^{+0.24}_{-0.17}$
$\Omega_m$	0.273	$0.63^{+0.44}_{-0.40}$	$10^5 \text{D}/\text{H}$	2.294	$2.58^{+0.51}_{-0.47}$	$\chi^2_{\text{lowEB}}$	5430.91	$5431.9 (\nu: 1.0)$
$\Omega_m h^2$	0.1382	$0.164^{+0.024}_{-0.027}$	$\text{Age}/\text{Gyr}$	13.60	$14.58^{+0.80}_{-0.99}$	$\chi^2_{\text{plikEE}}$	750.3	$758.7 (\nu: 9.9)$
$\Omega_\nu h^2$	0.0000	$< 0.0524$	$z_*$	1087.4	$1090.9^{+5.1}_{-5.0}$	$\chi^2_{\text{prior}}$	3.7	$7.6 (\nu: 5.7)$
$\Omega_m h^3$	0.0983	$0.087^{+0.012}_{-0.010}$	$r_*$	144.64	$142.6^{+2.7}_{-2.4}$	$\chi^2_{\text{CMB}}$	6181.2	$6190.7 (\nu: 10.3)$

Best-fit  $\chi^2_{\text{eff}} = 6184.87$ ;  $\bar{\chi}^2_{\text{eff}} = 6198.28$ ;  $R - 1 = 0.00866$

$\chi^2_{\text{eff}}$ : CMB - lowl\_QU\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 5430.91 plik\_dx11dr2\_HM\_v18\_EE: 750.25

### 7.23 base\_mnu\_plikHM\_TT\_lowl\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02219	$0.02216^{+0.00056}_{-0.00054}$	$\Omega_m$	0.347	$0.354^{+0.079}_{-0.072}$	$100\theta_*$	1.04118	$1.04118^{+0.00098}_{-0.0010}$
$\Omega_c h^2$	0.1188	$0.1189^{+0.0051}_{-0.0051}$	$\Omega_m h^2$	0.1452	$0.1457^{+0.0080}_{-0.0077}$	$D_A/\text{Gpc}$	13.907	$13.90^{+0.10}_{-0.11}$
$100\theta_{\text{MC}}$	1.04082	$1.0408^{+0.0011}_{-0.0011}$	$\Omega_\nu h^2$	0.00426	$< 0.00928$	$z_{\text{drag}}$	1059.47	$1059.4^{+1.0}_{-0.96}$
$\tau$	0.101	$0.0999^{+0.058}_{-0.060}$	$\Omega_m h^3$	0.09393	$0.0937^{+0.0030}_{-0.0031}$	$r_{\text{drag}}$	147.52	$147.5^{+1.1}_{-1.1}$
$\Sigma m_\nu [\text{eV}]$	0.396	$< 0.863$	$\sigma_8$	0.767	$0.762^{+0.075}_{-0.079}$	$k_D$	0.14034	$0.1404^{+0.0011}_{-0.0011}$
$\ln(10^{10} A_s)$	3.132	$3.13^{+0.11}_{-0.11}$	$\sigma_8 \Omega_m^{0.5}$	0.4522	$0.451^{+0.019}_{-0.018}$	$100\theta_D$	0.16097	$0.16099^{+0.00056}_{-0.00055}$
$n_s$	0.9680	$0.967^{+0.016}_{-0.015}$	$\sigma_8 \Omega_m^{0.25}$	0.5891	$0.586^{+0.033}_{-0.035}$	$z_{\text{eq}}$	3369	$3372^{+110}_{-110}$
$y_{\text{cal}}$	1.00010	$1.0002^{+0.0048}_{-0.0049}$	$\sigma_8/h^{0.5}$	0.954	$0.949^{+0.061}_{-0.064}$	$k_{\text{eq}}$	0.010286	$0.01030^{+0.00035}_{-0.00035}$
$A_{217}^{\text{CIB}}$	67.5	$64^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.499	$2.504^{+0.098}_{-0.091}$	$100\theta_{\text{eq}}$	0.8192	$0.819^{+0.022}_{-0.021}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$z_{\text{re}}$	12.1	$11.9^{+5.1}_{-5.5}$	$100\theta_{\text{s,eq}}$	0.4526	$0.453^{+0.011}_{-0.011}$
$A_{143}^{\text{tSZ}}$	7.20	$5.1^{+3.8}_{-3.9}$	$10^9 A_s$	2.293	$2.29^{+0.25}_{-0.25}$	$r_{\text{drag}}/D_V(0.57)$	0.06981	$0.0697^{+0.0034}_{-0.0034}$
$A_{100}^{\text{PS}}$	253	$260^{+50}_{-60}$	$10^9 A_s e^{-2\tau}$	1.8717	$1.872^{+0.030}_{-0.030}$	$H(0.57)$	91.39	$91.3^{+2.3}_{-2.4}$
$A_{143}^{\text{PS}}$	39.4	$45^{+20}_{-20}$	$D_{40}$	1230.8	$1233^{+25}_{-25}$	$D_A(0.57)$	1431	$1435^{+77}_{-74}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{220}$	5711	$5715^{+79}_{-81}$	$F_{\text{AP}}(0.57)$	0.6848	$0.686^{+0.018}_{-0.017}$
$A_{217}^{\text{PS}}$	97.3	$97^{+20}_{-20}$	$D_{810}$	2531.6	$2532^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4591	$0.456^{+0.028}_{-0.031}$
$A^{\text{kSZ}}$	0.0	—	$D_{1420}$	814.9	$814.5^{+9.9}_{-9.9}$	$\sigma_8(0.57)$	0.565	$0.560^{+0.067}_{-0.070}$
$A_{100}^{\text{dustTT}}$	7.43	$7.4^{+3.7}_{-3.6}$	$D_{2000}$	230.08	$229.8^{+3.9}_{-3.9}$	$f_{2000}^{143}$	30.0	$31^{+6}_{-6}$
$A_{143}^{\text{dustTT}}$	9.15	$9.1^{+3.6}_{-3.6}$	$n_{\text{s},0.002}$	0.9680	$0.967^{+0.016}_{-0.015}$	$f_{2000}^{143 \times 217}$	32.73	$33^{+4}_{-4}$
$A_{143 \times 217}^{\text{dustTT}}$	18.0	$17.2^{+8.1}_{-8.1}$	$Y_{\text{P}}$	0.245313	$0.24529^{+0.00025}_{-0.00025}$	$f_{2000}^{217}$	106.32	$106.5^{+4.3}_{-4.3}$
$A_{217}^{\text{dustTT}}$	82.4	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	0.246639	$0.24662^{+0.00025}_{-0.00025}$	$\chi_{\text{lensing}}^2$	8.63	$9.9 (\nu: 1.5)$
$c_{100}$	0.99784	$0.9979^{+0.0015}_{-0.0015}$	$10^5 \text{D}/\text{H}$	2.625	$2.63^{+0.11}_{-0.11}$	$\chi_{\text{lowl}}^2$	13.99	$14.4 (\nu: 0.8)$
$c_{217}$	0.99607	$0.9960^{+0.0028}_{-0.0028}$	$\text{Age}/\text{Gyr}$	13.982	$14.00^{+0.28}_{-0.27}$	$\chi_{\text{plik}}^2$	765.5	$779.3 (\nu: 15.7)$
$H_0$	64.7	$64.4^{+5.1}_{-5.2}$	$z_*$	1090.10	$1090.2^{+1.2}_{-1.1}$	$\chi_{\text{prior}}^2$	2.3	$7.4 (\nu: 6.2)$
$\Omega_\Lambda$	0.653	$0.646^{+0.072}_{-0.079}$	$r_*$	144.79	$144.7^{+1.1}_{-1.1}$	$\chi_{\text{CMB}}^2$	788.1	$803.7 (\nu: 15.8)$

Best-fit  $\chi_{\text{eff}}^2 = 790.42$ ;  $\bar{\chi}_{\text{eff}}^2 = 811.08$ ;  $R - 1 = 0.00848$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 8.63 commander\_rc2\_v1.1\_l2\_29\_B: 13.99 plik\_dx11dr2\_HM\_v18\_TT: 765.52



## 7.24 base\_mnu\_plikHM\_TT\_lowl\_lensing\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022317	$0.02233^{+0.00045}_{-0.00042}$	$\Omega_\nu h^2$	0.00136	$< 0.00404$	$k_D$	0.14016	$0.14006^{+0.00090}_{-0.00092}$
$\Omega_c h^2$	0.11781	$0.1173^{+0.0038}_{-0.0040}$	$\Omega_m h^3$	0.09566	$0.0954^{+0.0015}_{-0.0016}$	$100\theta_D$	0.16093	$0.16093^{+0.00051}_{-0.00052}$
$100\theta_{MC}$	1.04109	$1.04115^{+0.00085}_{-0.00086}$	$\sigma_8$	0.8099	$0.805^{+0.031}_{-0.033}$	$z_{eq}$	3349	$3336^{+81}_{-92}$
$\tau$	0.079	$0.089^{+0.061}_{-0.057}$	$\sigma_8 \Omega_m^{0.5}$	0.4506	$0.449^{+0.015}_{-0.015}$	$k_{eq}$	0.010221	$0.01018^{+0.00025}_{-0.00028}$
$\Sigma m_\nu$ [eV]	0.127	$< 0.376$	$\sigma_8 \Omega_m^{0.25}$	0.6041	$0.601^{+0.021}_{-0.021}$	$100\theta_{eq}$	0.8230	$0.826^{+0.018}_{-0.017}$
$\ln(10^{10} A_s)$	3.087	$3.11^{+0.11}_{-0.10}$	$\sigma_8/h^{0.5}$	0.9849	$0.980^{+0.033}_{-0.034}$	$100\theta_{s,eq}$	0.4545	$0.4559^{+0.0092}_{-0.0087}$
$n_s$	0.9699	$0.971^{+0.013}_{-0.012}$	$\langle d^2 \rangle^{1/2}$	2.456	$2.465^{+0.070}_{-0.066}$	$r_{drag}/D_V(0.57)$	0.07172	$0.07165^{+0.00096}_{-0.00097}$
$y_{cal}$	1.00006	$1.0001^{+0.0049}_{-0.0050}$	$z_{re}$	10.1	$10.8^{+5.1}_{-4.9}$	$H(0.57)$	92.91	$92.78^{+0.79}_{-0.88}$
$A_{217}^{CIB}$	67.4	$64^{+10}_{-10}$	$10^9 A_s$	2.192	$2.24^{+0.25}_{-0.23}$	$D_A(0.57)$	1388.3	$1391^{+21}_{-20}$
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8702	$1.867^{+0.027}_{-0.028}$	$F_{AP}(0.57)$	0.67553	$0.6759^{+0.0045}_{-0.0043}$
$A_{143}^{tSZ}$	7.16	$5.1^{+3.8}_{-3.9}$	$D_{40}$	1225.8	$1227^{+22}_{-22}$	$f\sigma_8(0.57)$	0.4717	$0.470^{+0.014}_{-0.015}$
$A_{100}^{PS}$	254	$258^{+50}_{-50}$	$D_{220}$	5718	$5719^{+77}_{-78}$	$\sigma_8(0.57)$	0.6035	$0.599^{+0.025}_{-0.026}$
$A_{143}^{PS}$	39.0	$43^{+20}_{-20}$	$D_{810}$	2531.1	$2530^{+27}_{-27}$	$f_{2000}^{143}$	29.8	$30^{+6}_{-6}$
$A_{143 \times 217}^{PS}$	32	$38^{+20}_{-20}$	$D_{1420}$	815.0	$815^{+10}_{-9.7}$	$f_{2000}^{143 \times 217}$	32.38	$32^{+4}_{-4}$
$A_{217}^{PS}$	96.9	$97^{+20}_{-20}$	$D_{2000}$	230.40	$230.5^{+3.7}_{-3.6}$	$f_{2000}^{217}$	105.93	$105.8^{+3.9}_{-4.1}$
$A^{kSZ}$	0.0	—	$n_{s,0.002}$	0.9699	$0.971^{+0.013}_{-0.012}$	$\chi^2_{lensing}$	9.22	$9.97 (\nu: 1.6)$
$A_{100}^{dustTT}$	7.41	$7.4^{+3.7}_{-3.7}$	$Y_P$	0.245369	$0.24538^{+0.00020}_{-0.00019}$	$\chi^2_{lowl}$	13.34	$13.57 (\nu: 0.4)$
$A_{143}^{dustTT}$	9.12	$9.0^{+3.6}_{-3.6}$	$Y_P^{BBN}$	0.246696	$0.24670^{+0.00020}_{-0.00019}$	$\chi^2_{plik}$	766.3	$779.7 (\nu: 15.6)$
$A_{143 \times 217}^{dustTT}$	17.6	$17.2^{+8.1}_{-7.7}$	$10^5 D/H$	2.601	$2.598^{+0.080}_{-0.084}$	$\chi^2_{6DF}$	0.015	$0.08 (\nu: 0.0)$
$A_{217}^{dustTT}$	81.9	$82^{+10}_{-10}$	Age/Gyr	13.818	$13.83^{+0.10}_{-0.095}$	$\chi^2_{MGS}$	1.34	$1.34 (\nu: 0.2)$
$c_{100}$	0.99790	$0.9979^{+0.0016}_{-0.0015}$	$z_*$	1089.80	$1089.74^{+0.71}_{-0.78}$	$\chi^2_{DR11CMass}$	2.40	$3.04 (\nu: 0.4)$
$c_{217}$	0.99596	$0.9959^{+0.0028}_{-0.0028}$	$r_*$	145.04	$145.15^{+0.85}_{-0.81}$	$\chi^2_{DR11LOWZ}$	0.54	$0.82 (\nu: 0.3)$
$H_0$	67.61	$67.4^{+1.4}_{-1.5}$	$100\theta_*$	1.04132	$1.04140^{+0.00087}_{-0.00089}$	$\chi^2_{prior}$	2.1	$7.3 (\nu: 6.0)$
$\Omega_\Lambda$	0.6904	$0.689^{+0.017}_{-0.018}$	$D_A/\text{Gpc}$	13.928	$13.938^{+0.078}_{-0.077}$	$\chi^2_{CMB}$	788.8	$803.2 (\nu: 14.9)$
$\Omega_m$	0.3096	$0.311^{+0.018}_{-0.017}$	$z_{drag}$	1059.67	$1059.66^{+0.92}_{-0.87}$	$\chi^2_{BAO}$	4.30	$5.3 (\nu: 0.9)$
$\Omega_m h^2$	0.14149	$0.1414^{+0.0025}_{-0.0025}$	$r_{drag}$	147.73	$147.84^{+0.86}_{-0.81}$			

Best-fit  $\chi^2_{eff} = 795.19$ ;  $\bar{\chi}^2_{eff} = 815.84$ ;  $R - 1 = 0.02005$

$\chi^2_{eff}$ : BAO - 6DF: 0.01 MGS: 1.34 DR11CMass: 2.40 DR11LOWZ: 0.54 CMB - smica\_g30\_ftl\_full\_pp: 9.22 commander\_rc2\_v1.1\_l2\_29\_B: 13.34 plik\_dx11dr2\_HM\_v18\_TT: 766.25

## 7.25 base\_mnu\_plikHM\_TT\_lowl\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022327	$0.02235^{+0.00046}_{-0.00042}$	$\Omega_m h^3$	0.09592	$0.0955^{+0.0015}_{-0.0015}$	$z_{\text{eq}}$	3351	$3334^{+79}_{-89}$
$\Omega_c h^2$	0.11792	$0.1171^{+0.0037}_{-0.0039}$	$\sigma_8$	0.8161	$0.808^{+0.029}_{-0.032}$	$k_{\text{eq}}$	0.010229	$0.01018^{+0.00024}_{-0.00027}$
$100\theta_{\text{MC}}$	1.04113	$1.04118^{+0.00083}_{-0.00086}$	$\sigma_8 \Omega_m^{0.5}$	0.4515	$0.448^{+0.015}_{-0.015}$	$100\theta_{\text{eq}}$	0.8225	$0.826^{+0.017}_{-0.016}$
$\tau$	0.076	$0.088^{+0.059}_{-0.055}$	$\sigma_8 \Omega_m^{0.25}$	0.6070	$0.602^{+0.020}_{-0.021}$	$100\theta_{\text{s,eq}}$	0.4542	$0.4561^{+0.0089}_{-0.0083}$
$\Sigma m_\nu$ [eV]	0.090	< 0.352	$\sigma_8/h^{0.5}$	0.9902	$0.982^{+0.031}_{-0.033}$	$r_{\text{drag}}/D_V(0.57)$	0.07192	$0.07180^{+0.00090}_{-0.00091}$
$\ln(10^{10} A_s)$	3.081	$3.10^{+0.11}_{-0.10}$	$\langle d^2 \rangle^{1/2}$	2.454	$2.463^{+0.068}_{-0.066}$	$H(0.57)$	93.10	$92.90^{+0.74}_{-0.85}$
$n_s$	0.9697	$0.972^{+0.013}_{-0.012}$	$z_{\text{re}}$	9.73	$10.7^{+4.8}_{-4.7}$	$D_A(0.57)$	1383.6	$1388^{+20}_{-18}$
$y_{\text{cal}}$	0.999997	$1.0001^{+0.0049}_{-0.0049}$	$10^9 A_s$	2.177	$2.23^{+0.25}_{-0.22}$	$F_{\text{AP}}(0.57)$	0.67463	$0.6752^{+0.0042}_{-0.0041}$
$A_{217}^{\text{CIB}}$	67.4	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8708	$1.867^{+0.026}_{-0.028}$	$f\sigma_8(0.57)$	0.4738	$0.470^{+0.013}_{-0.014}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1225.2	$1226^{+22}_{-22}$	$\sigma_8(0.57)$	0.6087	$0.602^{+0.023}_{-0.025}$
$A_{143}^{\text{tSZ}}$	7.17	$5.1^{+3.8}_{-4.0}$	$D_{220}$	5718	$5720^{+76}_{-78}$	$f_{2000}^{143}$	29.7	$30^{+6}_{-6}$
$A_{100}^{\text{PS}}$	254	$257^{+50}_{-50}$	$D_{810}$	2531.2	$2530^{+27}_{-27}$	$f_{2000}^{143 \times 217}$	32.29	$32^{+4}_{-4}$
$A_{143}^{\text{PS}}$	38.6	$43^{+20}_{-20}$	$D_{1420}$	815.0	$815^{+10}_{-9.6}$	$f_{2000}^{217}$	105.88	$105.7^{+3.9}_{-4.0}$
$A_{143 \times 217}^{\text{PS}}$	32	$38^{+20}_{-20}$	$D_{2000}$	230.44	$230.6^{+3.7}_{-3.5}$	$\chi^2_{\text{lensing}}$	9.50	10.0 ( $\nu$ : 1.7)
$A_{217}^{\text{PS}}$	96.6	$97^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9697	$0.972^{+0.013}_{-0.012}$	$\chi^2_{\text{lowl}}$	13.34	13.51 ( $\nu$ : 0.4)
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.245374	$0.24538^{+0.00020}_{-0.00019}$	$\chi^2_{\text{plik}}$	766.0	779.7 ( $\nu$ : 15.7)
$A_{100}^{\text{dustTT}}$	7.38	$7.4^{+3.7}_{-3.7}$	$Y_{\text{P}}^{\text{BBN}}$	0.246700	$0.24671^{+0.00020}_{-0.00019}$	$\chi^2_{\text{H070p6}}$	0.65	0.83 ( $\nu$ : 0.1)
$A_{143}^{\text{dustTT}}$	9.17	$9.0^{+3.6}_{-3.6}$	$10^5 \text{D}/\text{H}$	2.600	$2.595^{+0.080}_{-0.085}$	$\chi^2_{\text{JLA}}$	706.613	706.72 ( $\nu$ : 0.0)
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.1^{+8.0}_{-8.3}$	$\text{Age}/\text{Gyr}$	13.797	$13.823^{+0.098}_{-0.090}$	$\chi^2_{6\text{DF}}$	0.001	0.056 ( $\nu$ : 0.0)
$A_{217}^{\text{dustTT}}$	82.2	$82^{+10}_{-10}$	$z_*$	1089.79	$1089.71^{+0.74}_{-0.78}$	$\chi^2_{\text{MGS}}$	1.61	1.52 ( $\nu$ : 0.2)
$c_{100}$	0.99789	$0.9979^{+0.0016}_{-0.0015}$	$r_*$	145.01	$145.18^{+0.83}_{-0.78}$	$\chi^2_{\text{DR11CMASS}}$	2.43	2.92 ( $\nu$ : 0.3)
$c_{217}$	0.99604	$0.9959^{+0.0028}_{-0.0028}$	$100\theta_*$	1.04134	$1.04142^{+0.00086}_{-0.00088}$	$\chi^2_{\text{DR11LOWZ}}$	0.32	0.61 ( $\nu$ : 0.2)
$H_0$	67.93	$67.7^{+1.3}_{-1.4}$	$D_A/\text{Gpc}$	13.925	$13.940^{+0.077}_{-0.075}$	$\chi^2_{\text{prior}}$	2.1	7.3 ( $\nu$ : 6.0)
$\Omega_\Lambda$	0.6940	$0.692^{+0.016}_{-0.017}$	$z_{\text{drag}}$	1059.67	$1059.69^{+0.95}_{-0.90}$	$\chi^2_{\text{CMB}}$	788.9	803.3 ( $\nu$ : 15.0)
$\Omega_m$	0.3060	$0.308^{+0.017}_{-0.016}$	$r_{\text{drag}}$	147.70	$147.86^{+0.83}_{-0.80}$	$\chi^2_{\text{BAO}}$	4.36	5.1 ( $\nu$ : 0.6)
$\Omega_m h^2$	0.14121	$0.1411^{+0.0024}_{-0.0024}$	$k_{\text{D}}$	0.14020	$0.14005^{+0.00089}_{-0.00089}$			
$\Omega_\nu h^2$	0.00096	< 0.00379	$100\theta_{\text{D}}$	0.16092	$0.16091^{+0.00050}_{-0.00053}$			

Best-fit  $\chi^2_{\text{eff}} = 1502.59$ ;  $\bar{\chi}^2_{\text{eff}} = 1523.23$ ;  $R - 1 = 0.02283$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMASS: 2.43 DR11LOWZ: 0.32 CMB - smica\_g30\_ftl\_full\_pp: 9.50 commander\_rc2\_v1.1\_l2\_29\_B: 13.34 plik\_dx11dr2\_HM\_v18\_TT: 766.01 Hubble - H070p6: 0.65 SN - JLA December\_2013: 706.61

## 7.26 base\_mnu\_plikHM\_TTTEEE\_lowl\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022207	$0.02219^{+0.00033}_{-0.00033}$	$A_{100 \times 217}^{\text{dustTE}}$	0.304	$0.30^{+0.17}_{-0.17}$	$10^5 \text{D/H}$	2.622	$2.625^{+0.065}_{-0.063}$
$\Omega_c h^2$	0.11945	$0.1195^{+0.0031}_{-0.0030}$	$A_{143}^{\text{dustTE}}$	0.153	$0.15^{+0.11}_{-0.10}$	Age/Gyr	13.958	$13.97^{+0.24}_{-0.22}$
$100\theta_{\text{MC}}$	1.04069	$1.04068^{+0.00065}_{-0.00066}$	$A_{143 \times 217}^{\text{dustTE}}$	0.340	$0.34^{+0.16}_{-0.16}$	$z_*$	1090.12	$1090.17^{+0.71}_{-0.67}$
$\tau$	0.0911	$0.090^{+0.049}_{-0.049}$	$A_{217}^{\text{dustTE}}$	1.68	$1.67^{+0.51}_{-0.50}$	$r_*$	144.63	$144.60^{+0.68}_{-0.71}$
$\Sigma m_\nu [\text{eV}]$	0.340	$< 0.763$	$c_{100}$	0.99816	$0.9981^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04103	$1.04102^{+0.00061}_{-0.00061}$
$\ln(10^{10} A_s)$	3.114	$3.112^{+0.093}_{-0.093}$	$c_{217}$	0.99608	$0.9961^{+0.0028}_{-0.0028}$	$D_A/\text{Gpc}$	13.893	$13.890^{+0.062}_{-0.066}$
$n_s$	0.9652	$0.965^{+0.010}_{-0.010}$	$H_0$	64.90	$64.7^{+4.0}_{-4.2}$	$z_{\text{drag}}$	1059.55	$1059.54^{+0.63}_{-0.64}$
$y_{\text{cal}}$	1.00006	$1.0002^{+0.0047}_{-0.0049}$	$\Omega_\Lambda$	0.655	$0.651^{+0.055}_{-0.062}$	$r_{\text{drag}}$	147.35	$147.32^{+0.65}_{-0.68}$
$A_{217}^{\text{CIB}}$	67.9	$65^{+10}_{-10}$	$\Omega_m$	0.345	$0.349^{+0.062}_{-0.055}$	$k_D$	0.14051	$0.14055^{+0.00071}_{-0.00066}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$\Omega_m h^2$	0.1453	$0.1456^{+0.0059}_{-0.0056}$	$100\theta_D$	0.160929	$0.16092^{+0.00037}_{-0.00035}$
$A_{143}^{\text{tSZ}}$	7.30	$5.3^{+3.7}_{-3.8}$	$\Omega_\nu h^2$	0.00366	$< 0.00821$	$z_{\text{eq}}$	3385	$3386^{+69}_{-67}$
$A_{100}^{\text{PS}}$	258	$262^{+50}_{-50}$	$\Omega_m h^3$	0.09432	$0.0942^{+0.0025}_{-0.0027}$	$k_{\text{eq}}$	0.010335	$0.01034^{+0.00021}_{-0.00021}$
$A_{143}^{\text{PS}}$	39.1	$44^{+20}_{-20}$	$\sigma_8$	0.775	$0.770^{+0.064}_{-0.070}$	$100\theta_{\text{eq}}$	0.8161	$0.816^{+0.013}_{-0.013}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4549	$0.454^{+0.014}_{-0.014}$	$100\theta_{s,\text{eq}}$	0.4510	$0.4510^{+0.0067}_{-0.0066}$
$A_{217}^{\text{PS}}$	97.0	$97^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.5936	$0.591^{+0.029}_{-0.033}$	$r_{\text{drag}}/D_V(0.57)$	0.06990	$0.0698^{+0.0026}_{-0.0027}$
$A^{\text{kSZ}}$	0.00	$< 8.20$	$\sigma_8/h^{0.5}$	0.961	$0.956^{+0.053}_{-0.060}$	$H(0.57)$	91.57	$91.5^{+2.0}_{-2.1}$
$A_{100}^{\text{dustTT}}$	7.44	$7.5^{+3.7}_{-3.7}$	$\langle d^2 \rangle^{1/2}$	2.494	$2.496^{+0.090}_{-0.085}$	$D_A(0.57)$	1427	$1430^{+63}_{-58}$
$A_{143}^{\text{dustTT}}$	9.02	$9.0^{+3.6}_{-3.6}$	$z_{\text{re}}$	11.22	$11.0^{+4.5}_{-4.7}$	$F_{\text{AP}}(0.57)$	0.6843	$0.685^{+0.015}_{-0.013}$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.2^{+8.1}_{-8.1}$	$10^9 A_s$	2.252	$2.25^{+0.22}_{-0.20}$	$f\sigma_8(0.57)$	0.4622	$0.459^{+0.024}_{-0.028}$
$A_{217}^{\text{dustTT}}$	81.7	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8768	$1.877^{+0.024}_{-0.025}$	$\sigma_8(0.57)$	0.571	$0.567^{+0.056}_{-0.061}$
$A_{100}^{\text{dustEE}}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{40}$	1236.4	$1237^{+23}_{-23}$	$f_{2000}^{143}$	30.0	$30^{+5}_{-5}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0491	$0.0489^{+0.0098}_{-0.0097}$	$D_{220}$	5724	$5728^{+75}_{-75}$	$f_{2000}^{143 \times 217}$	32.73	$33^{+4}_{-4}$
$A_{100 \times 217}^{\text{dustEE}}$	0.098	$0.0997^{+0.064}_{-0.063}$	$D_{810}$	2533.7	$2534^{+26}_{-26}$	$f_{2000}^{217}$	106.29	$106.4^{+3.7}_{-3.8}$
$A_{143}^{\text{dustEE}}$	0.1004	$0.100^{+0.013}_{-0.013}$	$D_{1420}$	814.7	$814.8^{+9.1}_{-9.1}$	$\chi^2_{\text{lensing}}$	9.10	$10.0 (\nu: 1.5)$
$A_{143 \times 217}^{\text{dustEE}}$	0.225	$0.225^{+0.092}_{-0.091}$	$D_{2000}$	229.93	$229.9^{+3.1}_{-3.1}$	$\chi^2_{\text{lowl}}$	14.34	$14.6 (\nu: 0.6)$
$A_{217}^{\text{dustEE}}$	0.654	$0.65^{+0.26}_{-0.25}$	$n_{s,0.002}$	0.9652	$0.965^{+0.010}_{-0.010}$	$\chi^2_{\text{plik}}$	2434.8	$2453.8 (\nu: 23.0)$
$A_{100}^{\text{dustTE}}$	0.142	$0.140^{+0.075}_{-0.074}$	$Y_P$	0.245321	$0.24531^{+0.00015}_{-0.00015}$	$\chi^2_{\text{prior}}$	7.1	$19.5 (\nu: 15.4)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.057}_{-0.058}$	$Y_P^{\text{BBN}}$	0.246647	$0.24664^{+0.00015}_{-0.00015}$	$\chi^2_{\text{CMB}}$	2458.2	$2478.4 (\nu: 22.7)$

Best-fit  $\chi^2_{\text{eff}} = 2465.39$ ;  $\bar{\chi}^2_{\text{eff}} = 2497.84$ ;  $R - 1 = 0.01148$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.10 commander\_rc2\_v1.1.l2\_29\_B: 14.34 plik\_dx11dr2\_HM\_v18.TTTEEE: 2434.80

## 7.27 base\_mnu\_plikHM\_TTTEEE\_lowl\_lensing\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022289	$0.02230^{+0.00029}_{-0.00029}$	$A_{143 \times 217}^{\text{dustTE}}$	0.334	$0.33^{+0.16}_{-0.16}$	$100\theta_*$	1.04107	$1.04112^{+0.00058}_{-0.00058}$
$\Omega_c h^2$	0.11924	$0.1185^{+0.0025}_{-0.0025}$	$A_{217}^{\text{dustTE}}$	1.65	$1.66^{+0.51}_{-0.51}$	$D_A/\text{Gpc}$	13.899	$13.914^{+0.050}_{-0.050}$
$100\theta_{\text{MC}}$	1.04089	$1.04090^{+0.00056}_{-0.00058}$	$c_{100}$	0.99818	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.70	$1059.68^{+0.58}_{-0.57}$
$\tau$	0.0597	$0.073^{+0.043}_{-0.036}$	$c_{217}$	0.99608	$0.9960^{+0.0027}_{-0.0029}$	$r_{\text{drag}}$	147.39	$147.55^{+0.54}_{-0.55}$
$\Sigma m_\nu [\text{eV}]$	0.033	$< 0.263$	$H_0$	67.84	$67.4^{+1.2}_{-1.4}$	$k_D$	0.14049	$0.14034^{+0.00059}_{-0.00059}$
$\ln(10^{10} A_s)$	3.052	$3.076^{+0.081}_{-0.068}$	$\Omega_\Lambda$	0.6917	$0.687^{+0.015}_{-0.017}$	$100\theta_D$	0.160893	$0.16090^{+0.00034}_{-0.00033}$
$n_s$	0.9660	$0.9674^{+0.0092}_{-0.0092}$	$\Omega_m$	0.3083	$0.313^{+0.017}_{-0.015}$	$z_{\text{eq}}$	3382	$3366^{+55}_{-57}$
$y_{\text{cal}}$	0.99987	$1.0001^{+0.0048}_{-0.0047}$	$\Omega_m h^2$	0.14188	$0.1420^{+0.0021}_{-0.0020}$	$k_{\text{eq}}$	0.010322	$0.01027^{+0.00017}_{-0.00017}$
$A_{217}^{\text{CIB}}$	67.2	$64^{+10}_{-10}$	$\Omega_\nu h^2$	0.00036	$< 0.00283$	$100\theta_{\text{eq}}$	0.8166	$0.820^{+0.011}_{-0.010}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.06	—	$\Omega_m h^3$	0.09626	$0.0957^{+0.0010}_{-0.0011}$	$100\theta_{s,\text{eq}}$	0.4512	$0.4528^{+0.0058}_{-0.0054}$
$A_{143}^{\text{tSZ}}$	7.25	$5.3^{+3.6}_{-3.7}$	$\sigma_8$	0.8201	$0.810^{+0.026}_{-0.028}$	$r_{\text{drag}}/D_V(0.57)$	0.07176	$0.07154^{+0.00081}_{-0.00088}$
$A_{100}^{\text{PS}}$	256	$261^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4553	$0.453^{+0.012}_{-0.013}$	$H(0.57)$	93.14	$92.86^{+0.68}_{-0.74}$
$A_{143}^{\text{PS}}$	39.4	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6111	$0.606^{+0.017}_{-0.017}$	$D_A(0.57)$	1384.2	$1391^{+19}_{-18}$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9957	$0.987^{+0.027}_{-0.029}$	$F_{\text{AP}}(0.57)$	0.67520	$0.6763^{+0.0042}_{-0.0037}$
$A_{217}^{\text{PS}}$	97.3	$97^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.450	$2.458^{+0.058}_{-0.058}$	$f\sigma_8(0.57)$	0.4756	$0.472^{+0.011}_{-0.013}$
$A^{\text{kSZ}}$	0.01	$< 8.03$	$z_{\text{re}}$	8.23	$9.4^{+3.7}_{-3.6}$	$\sigma_8(0.57)$	0.6107	$0.603^{+0.021}_{-0.023}$
$A_{100}^{\text{dustTT}}$	7.50	$7.4^{+3.9}_{-3.8}$	$10^9 A_s$	2.116	$2.17^{+0.18}_{-0.14}$	$f_{2000}^{143}$	29.6	$30^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	9.07	$9.1^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8776	$1.874^{+0.023}_{-0.023}$	$f_{2000}^{143 \times 217}$	32.41	$32^{+4}_{-4}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.3^{+7.9}_{-8.1}$	$D_{40}$	1228.9	$1231^{+22}_{-22}$	$f_{2000}^{217}$	105.93	$105.9^{+3.8}_{-3.7}$
$A_{217}^{\text{dustTT}}$	82.2	$82^{+10}_{-10}$	$D_{220}$	5722	$5725^{+73}_{-77}$	$\chi_{\text{lensing}}^2$	10.06	$10.4 (\nu: 1.9)$
$A_{100}^{\text{dustEE}}$	0.0813	$0.082^{+0.011}_{-0.011}$	$D_{810}$	2533.6	$2533^{+26}_{-25}$	$\chi_{\text{lowl}}^2$	13.65	$13.78 (\nu: 0.4)$
$A_{100 \times 143}^{\text{dustEE}}$	0.0489	$0.0491^{+0.0098}_{-0.0097}$	$D_{1420}$	814.8	$814.8^{+9.2}_{-9.0}$	$\chi_{\text{plik}}^2$	2435.1	$2453.6 (\nu: 23.5)$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.0996^{+0.064}_{-0.063}$	$D_{2000}$	230.16	$230.2^{+3.0}_{-3.1}$	$\chi_{6\text{DF}}^2$	0.010	$0.09 (\nu: 0.0)$
$A_{143}^{\text{dustEE}}$	0.1004	$0.101^{+0.013}_{-0.013}$	$n_{s,0.002}$	0.9660	$0.9674^{+0.0092}_{-0.0092}$	$\chi_{\text{MGS}}^2$	1.41	$1.20 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dustEE}}$	0.226	$0.224^{+0.093}_{-0.088}$	$Y_P$	0.245357	$0.24536^{+0.00013}_{-0.00014}$	$\chi_{\text{DR11CMass}}^2$	2.41	$3.05 (\nu: 0.4)$
$A_{217}^{\text{dustEE}}$	0.653	$0.65^{+0.26}_{-0.25}$	$Y_P^{\text{BBN}}$	0.246684	$0.24669^{+0.00013}_{-0.00014}$	$\chi_{\text{DR11LOWZ}}^2$	0.48	$0.95 (\nu: 0.3)$
$A_{100}^{\text{dustTE}}$	0.142	$0.142^{+0.074}_{-0.076}$	$10^5 D/H$	2.607	$2.604^{+0.055}_{-0.054}$	$\chi_{\text{prior}}^2$	7.0	$19.7 (\nu: 15.6)$
$A_{100 \times 143}^{\text{dustTE}}$	0.133	$0.132^{+0.057}_{-0.058}$	$\text{Age/Gyr}$	13.786	$13.821^{+0.082}_{-0.073}$	$\chi_{\text{CMB}}^2$	2458.8	$2477.8 (\nu: 21.9)$
$A_{100 \times 217}^{\text{dustTE}}$	0.300	$0.30^{+0.16}_{-0.17}$	$z_*$	1089.95	$1089.88^{+0.51}_{-0.50}$	$\chi_{\text{BAO}}^2$	4.31	$5.3 (\nu: 0.9)$
$A_{143}^{\text{dustTE}}$	0.155	$0.15^{+0.11}_{-0.10}$	$r_*$	144.70	$144.86^{+0.54}_{-0.54}$			

Best-fit  $\chi_{\text{eff}}^2 = 2470.12$ ;  $\bar{\chi}_{\text{eff}}^2 = 2502.70$ ;  $R - 1 = 0.03617$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.41 DR11LOWZ: 0.48 CMB - smica\_g30\_ftl\_full\_pp: 10.06 commander\_rc2.v1.1\_l2\_29\_B: 13.65 plik\_dx11dr2\_HM.v18\_TTTEEE:

2435.11

## 7.28 base\_mnu\_plikHM\_TTTEEE\_lowl\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022280	$0.02232^{+0.00028}_{-0.00027}$	$A_{217}^{\text{dust}TE}$	1.67	$1.66^{+0.51}_{-0.51}$	$z_{\text{drag}}$	1059.67	$1059.70^{+0.58}_{-0.57}$
$\Omega_c h^2$	0.11919	$0.1184^{+0.0024}_{-0.0025}$	$c_{100}$	0.99813	$0.9981^{+0.0016}_{-0.0015}$	$r_{\text{drag}}$	147.41	$147.57^{+0.52}_{-0.53}$
$100\theta_{\text{MC}}$	1.04090	$1.04092^{+0.00055}_{-0.00058}$	$c_{217}$	0.99608	$0.9960^{+0.0028}_{-0.0029}$	$k_{\text{D}}$	0.14045	$0.14033^{+0.00058}_{-0.00058}$
$\tau$	0.0573	$0.072^{+0.043}_{-0.035}$	$H_0$	68.06	$67.6^{+1.1}_{-1.3}$	$100\theta_{\text{D}}$	0.160907	$0.16088^{+0.00033}_{-0.00033}$
$\Sigma m_\nu$ [eV]	0.002	< 0.234	$\Omega_\Lambda$	0.6946	$0.690^{+0.014}_{-0.016}$	$z_{\text{eq}}$	3381	$3363^{+53}_{-56}$
$\ln(10^{10} A_s)$	3.047	$3.074^{+0.079}_{-0.066}$	$\Omega_{\text{m}}$	0.3054	$0.310^{+0.016}_{-0.014}$	$k_{\text{eq}}$	0.010318	$0.01027^{+0.00016}_{-0.00017}$
$n_s$	0.9658	$0.9677^{+0.0091}_{-0.0089}$	$\Omega_{\text{m}} h^2$	0.14149	$0.1418^{+0.0020}_{-0.0019}$	$100\theta_{\text{eq}}$	0.8168	$0.820^{+0.011}_{-0.010}$
$y_{\text{cal}}$	0.99986	$1.0001^{+0.0047}_{-0.0047}$	$\Omega_\nu h^2$	0.00003	< 0.00251	$100\theta_{\text{s,eq}}$	0.4513	$0.4530^{+0.0057}_{-0.0052}$
$A_{217}^{\text{CIB}}$	67.9	$64^{+10}_{-10}$	$\Omega_{\text{m}} h^3$	0.09631	$0.09583^{+0.00093}_{-0.0010}$	$r_{\text{drag}}/D_V(0.57)$	0.07191	$0.07166^{+0.00077}_{-0.00083}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\sigma_8$	0.8231	$0.812^{+0.025}_{-0.026}$	$H(0.57)$	93.25	$92.95^{+0.63}_{-0.67}$
$A_{143}^{\text{tSZ}}$	7.32	$5.4^{+3.6}_{-3.7}$	$\sigma_8 \Omega_{\text{m}}^{0.5}$	0.4549	$0.452^{+0.012}_{-0.013}$	$D_A(0.57)$	1381.2	$1388^{+18}_{-17}$
$A_{100}^{\text{PS}}$	257	$261^{+50}_{-50}$	$\sigma_8 \Omega_{\text{m}}^{0.25}$	0.6119	$0.606^{+0.016}_{-0.017}$	$F_{\text{AP}}(0.57)$	0.67448	$0.6757^{+0.0039}_{-0.0035}$
$A_{143}^{\text{PS}}$	38.4	$43^{+10}_{-20}$	$\sigma_8/h^{0.5}$	0.9976	$0.988^{+0.026}_{-0.027}$	$f\sigma_8(0.57)$	0.4759	$0.473^{+0.011}_{-0.012}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.448	$2.456^{+0.058}_{-0.057}$	$\sigma_8(0.57)$	0.6133	$0.605^{+0.019}_{-0.022}$
$A_{217}^{\text{PS}}$	96.3	$97^{+20}_{-20}$	$z_{\text{re}}$	7.98	$9.3^{+3.7}_{-3.5}$	$f_{2000}^{143}$	29.7	$30^{+5}_{-5}$
$A^{\text{kSZ}}$	0.00	< 7.94	$10^9 A_s$	2.105	$2.17^{+0.18}_{-0.14}$	$f_{2000}^{143 \times 217}$	32.51	$32^{+4}_{-4}$
$A_{100}^{\text{dust}TT}$	7.42	$7.4^{+4.0}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8773	$1.874^{+0.023}_{-0.023}$	$f_{2000}^{217}$	106.05	$105.8^{+3.8}_{-3.8}$
$A_{143}^{\text{dust}TT}$	9.13	$9.0^{+3.6}_{-3.6}$	$D_{40}$	1228.2	$1230^{+22}_{-21}$	$\chi_{\text{lensing}}^2$	9.95	10.4 ( $\nu$ : 2.0)
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.3^{+8.0}_{-8.1}$	$D_{220}$	5722	$5726^{+73}_{-77}$	$\chi_{\text{lowl}}^2$	13.62	13.73 ( $\nu$ : 0.4)
$A_{217}^{\text{dust}TT}$	81.7	$82^{+10}_{-10}$	$D_{810}$	2533.1	$2532^{+26}_{-25}$	$\chi_{\text{plik}}^2$	2435.1	2453.6 ( $\nu$ : 23.3)
$A_{100}^{\text{dust}EE}$	0.0814	$0.082^{+0.011}_{-0.011}$	$D_{1420}$	814.5	$814.9^{+9.2}_{-9.0}$	$\chi_{\text{H070p6}}^2$	0.58	0.85 ( $\nu$ : 0.1)
$A_{100 \times 143}^{\text{dust}EE}$	0.0491	$0.0492^{+0.0098}_{-0.0097}$	$D_{2000}$	230.04	$230.3^{+3.0}_{-3.1}$	$\chi_{\text{JLA}}^2$	706.602	706.76 ( $\nu$ : 0.0)
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.0997^{+0.064}_{-0.063}$	$n_{\text{s},0.002}$	0.9658	$0.9677^{+0.0091}_{-0.0089}$	$\chi_{\text{6DF}}^2$	0.001	0.060 ( $\nu$ : 0.0)
$A_{143}^{\text{dust}EE}$	0.1004	$0.101^{+0.013}_{-0.013}$	$Y_{\text{P}}$	0.245353	$0.24537^{+0.00012}_{-0.00013}$	$\chi_{\text{MGS}}^2$	1.61	1.34 ( $\nu$ : 0.1)
$A_{143 \times 217}^{\text{dust}EE}$	0.226	$0.225^{+0.094}_{-0.092}$	$Y_{\text{P}}^{\text{BBN}}$	0.246679	$0.24670^{+0.00012}_{-0.00013}$	$\chi_{\text{DR11CMass}}^2$	2.44	2.87 ( $\nu$ : 0.2)
$A_{217}^{\text{dust}EE}$	0.653	$0.66^{+0.26}_{-0.25}$	$10^5 \text{D}/\text{H}$	2.608	$2.601^{+0.052}_{-0.052}$	$\chi_{\text{DR11LOWZ}}^2$	0.32	0.74 ( $\nu$ : 0.2)
$A_{100}^{\text{dust}TE}$	0.140	$0.142^{+0.074}_{-0.075}$	Age/Gyr	13.775	$13.811^{+0.075}_{-0.068}$	$\chi_{\text{prior}}^2$	7.1	19.7 ( $\nu$ : 15.9)
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.058}_{-0.059}$	$z_*$	1089.958	$1089.85^{+0.49}_{-0.49}$	$\chi_{\text{CMB}}^2$	2458.6	2477.8 ( $\nu$ : 21.7)
$A_{100 \times 217}^{\text{dust}TE}$	0.303	$0.30^{+0.16}_{-0.17}$	$r_*$	144.72	$144.88^{+0.53}_{-0.53}$	$\chi_{\text{BAO}}^2$	4.38	5.0 ( $\nu$ : 0.5)
$A_{143}^{\text{dust}TE}$	0.156	$0.15^{+0.11}_{-0.11}$	$100\theta_*$	1.04106	$1.04113^{+0.00057}_{-0.00058}$			
$A_{143 \times 217}^{\text{dust}TE}$	0.339	$0.33^{+0.16}_{-0.16}$	$D_{\text{A}}/\text{Gpc}$	13.9009	$13.916^{+0.049}_{-0.050}$			

Best-fit  $\chi_{\text{eff}}^2 = 3177.29$ ;  $\bar{\chi}_{\text{eff}}^2 = 3210.11$ ;  $R - 1 = 0.04365$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMASS: 2.44 DR11LOWZ: 0.32 CMB - smica\_g30\_ftl\_full\_pp: 9.95 commander\_rc2\_v1.1\_l2\_29\_B: 13.62 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2435.06 Hubble - H070p6: 0.58 SN - JLA December\_2013: 706.60

## 7.29 base\_mnu\_CamSpecHM\_TT\_lowl\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02217	$0.02219^{+0.00054}_{-0.00054}$ (+0.1 $\sigma$ )	$H_0$	65.0	$64.7^{+5.1}_{-5.2}$ (+0.1 $\sigma$ )	$100\theta_*$	1.04123	$1.0413^{+0.0010}_{-0.00099}$ (+0.1 $\sigma$ )
$\Omega_c h^2$	0.1187	$0.1185^{+0.0051}_{-0.0051}$ (-0.2 $\sigma$ )	$\Omega_\Lambda$	0.657	$0.650^{+0.071}_{-0.079}$ (+0.1 $\sigma$ )	$z_{\text{drag}}$	1059.40	$1059.5^{+1.0}_{-0.98}$ (+0.1 $\sigma$ )
$100\theta_{\text{MC}}$	1.04086	$1.0409^{+0.0011}_{-0.0011}$ (+0.1 $\sigma$ )	$\Omega_m$	0.343	$0.350^{+0.079}_{-0.071}$ (-0.1 $\sigma$ )	$r_{\text{drag}}$	147.57	$147.6^{+1.1}_{-1.1}$ (+0.1 $\sigma$ )
$\tau$	0.101	$0.106^{+0.059}_{-0.060}$ (+0.2 $\sigma$ )	$\Omega_m h^2$	0.1448	$0.1452^{+0.0080}_{-0.0076}$ (-0.1 $\sigma$ )	$k_D$	0.14028	$0.1403^{+0.0011}_{-0.0010}$ (-0.1 $\sigma$ )
$\Sigma m_\nu$ [eV]	0.363	< 0.870 (-0.0 $\sigma$ )	$\Omega_\nu h^2$	0.00391	< 0.00935 (-0.0 $\sigma$ )	$100\theta_D$	0.16100	$0.16095^{+0.00055}_{-0.00053}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.128	$3.14^{+0.11}_{-0.11}$ (+0.1 $\sigma$ )	$\Omega_m h^3$	0.09409	$0.0938^{+0.0029}_{-0.0031}$ (+0.0 $\sigma$ )	$z_{\text{eq}}$	3367	$3362^{+110}_{-110}$ (-0.2 $\sigma$ )
$n_s$	0.9687	$0.970^{+0.016}_{-0.015}$ (+0.4 $\sigma$ )	$\sigma_8$	0.773	$0.765^{+0.075}_{-0.080}$ (+0.1 $\sigma$ )	$100\theta_{\text{eq}}$	0.8194	$0.821^{+0.023}_{-0.021}$ (+0.2 $\sigma$ )
$y_{\text{cal}}$	0.99988	$1.0001^{+0.0048}_{-0.0048}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4529	$0.451^{+0.018}_{-0.019}$ (-0.0 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07001	$0.0698^{+0.0032}_{-0.0034}$ (+0.1 $\sigma$ )
$A_{100}^{\text{PS}}$	251.3	$246^{+40}_{-50}$ (-0.5 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.5917	$0.587^{+0.033}_{-0.036}$ (+0.1 $\sigma$ )	$H(0.57)$	91.54	$91.4^{+2.4}_{-2.4}$ (+0.1 $\sigma$ )
$A_{143}^{\text{PS}}$	35.8	$39^{+20}_{-20}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	0.959	$0.952^{+0.061}_{-0.066}$ (+0.1 $\sigma$ )	$D_A(0.57)$	1427	$1432^{+78}_{-74}$ (-0.1 $\sigma$ )
$A_{217}^{\text{PS}}$	95.2	$98^{+30}_{-30}$ (+0.1 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.493	$2.503^{+0.097}_{-0.094}$ (-0.0 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6838	$0.685^{+0.018}_{-0.017}$ (-0.1 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.2	$46^{+10}_{-10}$ (-2.7 $\sigma$ )	$z_{\text{re}}$	12.0	$12.3^{+5.0}_{-5.3}$ (+0.2 $\sigma$ )	$f\sigma_8(0.57)$	0.4613	$0.457^{+0.028}_{-0.032}$ (+0.1 $\sigma$ )
$A_{143}^{\text{tSZ}}$	2.69	< 6.65 (-1.0 $\sigma$ )	$10^9 A_s$	2.283	$2.31^{+0.26}_{-0.25}$ (+0.1 $\sigma$ )	$\sigma_8(0.57)$	0.570	$0.564^{+0.067}_{-0.072}$ (+0.1 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.401	$0.52^{+0.23}_{-0.20}$	$10^9 A_s e^{-2\tau}$	1.8667	$1.866^{+0.030}_{-0.029}$ (-0.4 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246216	$0.24622^{+0.00023}_{-0.00024}$ (-3.1 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1226.5	$1225^{+25}_{-25}$ (-0.6 $\sigma$ )	$f_{2000}^{143}$	29.9	$29^{+6}_{-6}$ (-0.5 $\sigma$ )
$A^{\text{kSZ}}$	6.1	—	$D_{220}$	5690	$5694^{+79}_{-79}$ (-0.5 $\sigma$ )	$f_{2000}^{217}$	107.13	$106.6^{+4.3}_{-4.3}$ (+0.1 $\sigma$ )
$A_{100}^{\text{dust}}$	0.990	$0.99^{+0.38}_{-0.38}$	$D_{810}$	2525.5	$2527^{+27}_{-27}$ (-0.3 $\sigma$ )	$f_{2000}^{143 \times 217}$	32.28	$32^{+5}_{-5}$ (-0.4 $\sigma$ )
$A_{143}^{\text{dust}}$	1.035	$1.03^{+0.36}_{-0.36}$	$D_{1420}$	813.2	$814.4^{+9.9}_{-9.8}$ (-0.0 $\sigma$ )	$\chi^2_{\text{lensing}}$	8.49	$9.8 (\nu: 1.3)$ (-0.1 $\sigma$ )
$A_{217}^{\text{dust}}$	1.228	$1.21^{+0.22}_{-0.23}$	$n_{\text{s},0.002}$	0.9687	$0.970^{+0.016}_{-0.015}$ (+0.4 $\sigma$ )	$\chi^2_{\text{lowl}}$	13.70	$13.9 (\nu: 0.7)$ (-0.4 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.955	$0.98^{+0.35}_{-0.35}$	$Y_{\text{P}}$	0.244888	$0.24490^{+0.00023}_{-0.00024}$ (-3.1 $\sigma$ )	$\chi^2_{\text{CamSpec}}$	8046.3	$8061.2 (\nu: 16.9)$
$c_{100}$	0.99654	$0.9967^{+0.0019}_{-0.0019}$ (-1.5 $\sigma$ )	Age/Gyr	13.966	$13.99^{+0.28}_{-0.27}$ (-0.1 $\sigma$ )	$\chi^2_{\text{CMB}}$	8068.5	$8084.9 (\nu: 17.1)$ (+1295.1 $\sigma$ )
$c_{217}$	0.99757	$0.9972^{+0.0035}_{-0.0035}$ (+0.9 $\sigma$ )	$z_*$	1090.10	$1090.1^{+1.1}_{-1.1}$ (-0.2 $\sigma$ )			
$\beta_1^1$	-0.09	$-0.1^{+2.0}_{-2.0}$	$r_*$	144.84	$144.8^{+1.1}_{-1.1}$ (+0.2 $\sigma$ )			

Best-fit  $\chi^2_{\text{eff}} = 8072.39$ ;  $\Delta\chi^2_{\text{eff}} = 7281.98$ ;  $\bar{\chi}^2_{\text{eff}} = 8093.34$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 7282.26$ ;  $R - 1 = 0.01168$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 8.49 ( $\Delta$  -0.14) commander\_rc2\_v1.1\_l2\_29\_B: 13.70 ( $\Delta$  -0.29) CamSpec like\_v9.10CMH\_unified: 8046.28

### 7.30 base\_mnu\_CamSpecHM\_TT\_lowl\_lensing\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00043}_{-0.00042} (+0.1\sigma)$	$\Omega_m$	$0.311^{+0.018}_{-0.017} (-0.0\sigma)$	$100\theta_D$	$0.16089^{+0.00050}_{-0.00050} (-0.1\sigma)$
$\Omega_c h^2$	$0.1170^{+0.0035}_{-0.0039} (-0.1\sigma)$	$\Omega_m h^2$	$0.1413^{+0.0025}_{-0.0025} (-0.1\sigma)$	$z_{\text{eq}}$	$3331^{+86}_{-88} (-0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04119^{+0.00089}_{-0.00088} (+0.1\sigma)$	$\Omega_\nu h^2$	$< 0.00415 (+0.1\sigma)$	$100\theta_{\text{eq}}$	$0.827^{+0.018}_{-0.017} (+0.1\sigma)$
$\tau$	$0.095^{+0.059}_{-0.057} (+0.2\sigma)$	$\Omega_m h^3$	$0.0953^{+0.0015}_{-0.0016} (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07167^{+0.00096}_{-0.00096} (+0.0\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.386 (+0.1\sigma)$	$\sigma_8$	$0.806^{+0.032}_{-0.035} (+0.1\sigma)$	$H(0.57)$	$92.78^{+0.79}_{-0.90} (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.11^{+0.11}_{-0.10} (+0.2\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.015}_{-0.017} (+0.0\sigma)$	$D_A(0.57)$	$1391^{+22}_{-20} (-0.0\sigma)$
$n_s$	$0.974^{+0.013}_{-0.013} (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.601^{+0.021}_{-0.022} (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6758^{+0.0045}_{-0.0043} (-0.0\sigma)$
$y_{\text{cal}}$	$1.0000^{+0.0049}_{-0.0048} (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.981^{+0.034}_{-0.036} (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.470^{+0.015}_{-0.015} (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$244^{+40}_{-50} (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.466^{+0.067}_{-0.064} (+0.0\sigma)$	$\sigma_8(0.57)$	$0.600^{+0.026}_{-0.027} (+0.1\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} (-0.7\sigma)$	$z_{\text{re}}$	$11.3^{+4.7}_{-4.8} (+0.2\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24630^{+0.00018}_{-0.00018} (-4.0\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} (+0.1\sigma)$	$10^9 A_s$	$2.25^{+0.25}_{-0.23} (+0.2\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-6} (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.862^{+0.027}_{-0.027} (-0.4\sigma)$	$f_{2000}^{217}$	$105.9^{+4.0}_{-4.0} (+0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.80 (-0.9\sigma)$	$D_{40}$	$1220^{+23}_{-23} (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} (-0.4\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.23}$	$D_{220}$	$5698^{+79}_{-78} (-0.5\sigma)$	$\chi_{\text{lensing}}^2$	$9.8 (\nu: 1.5) (-0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2526^{+28}_{-27} (-0.3\sigma)$	$\chi_{\text{lowl}}^2$	$13.15 (\nu: 0.4) (-0.5\sigma)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$815^{+10}_{-9.9} (-0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.4 (\nu: 16.7)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$n_{\text{s},0.002}$	$0.974^{+0.013}_{-0.013} (+0.4\sigma)$	$\chi_{6\text{DF}}^2$	$0.08 (\nu: 0.0) (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.35}$	$Y_{\text{P}}$	$0.24497^{+0.00019}_{-0.00017} (-4.0\sigma)$	$\chi_{\text{MGS}}^2$	$1.36 (\nu: 0.2) (+0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.23}$	$\text{Age/Gyr}$	$13.84^{+0.11}_{-0.096} (+0.0\sigma)$	$\chi_{\text{DR11CMass}}^2$	$3.03 (\nu: 0.4) (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.97^{+0.34}_{-0.34}$	$z_*$	$1089.68^{+0.73}_{-0.74} (-0.2\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.80 (\nu: 0.3) (-0.0\sigma)$
$c_{100}$	$0.9967^{+0.0019}_{-0.0019} (-1.5\sigma)$	$r_*$	$145.19^{+0.84}_{-0.81} (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.4 (\nu: 5.9) (+0.3\sigma)$
$c_{217}$	$0.9972^{+0.0036}_{-0.0035} (+0.9\sigma)$	$100\theta_*$	$1.04145^{+0.00090}_{-0.00089} (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$8084.4 (\nu: 15.7) (+1336.0\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$z_{\text{drag}}$	$1059.68^{+0.88}_{-0.92} (+0.0\sigma)$	$\chi_{\text{BAO}}^2$	$5.3 (\nu: 0.9) (-0.0\sigma)$
$H_0$	$67.4^{+1.4}_{-1.5} (+0.0\sigma)$	$r_{\text{drag}}$	$147.88^{+0.85}_{-0.82} (+0.1\sigma)$		
$\Omega_\Lambda$	$0.689^{+0.017}_{-0.018} (+0.0\sigma)$	$k_D$	$0.14006^{+0.00092}_{-0.00091} (-0.0\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 8098.12; \Delta \bar{\chi}_{\text{eff}}^2 = 7282.28; R - 1 = 0.02604$$



### 7.31 base\_mnu\_CamSpecHM\_TT\_lowl\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00042}_{-0.00044} \quad (+0.1\sigma)$	$\Omega_m$	$0.308^{+0.017}_{-0.016} \quad (-0.0\sigma)$	$100\theta_D$	$0.16088^{+0.00050}_{-0.00050} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1169^{+0.0034}_{-0.0038} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1411^{+0.0024}_{-0.0024} \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3329^{+84}_{-85} \quad (-0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04121^{+0.00088}_{-0.00087} \quad (+0.1\sigma)$	$\Omega_\nu h^2$	$< 0.00382 \quad (+0.1\sigma)$	$100\theta_{\text{eq}}$	$0.827^{+0.017}_{-0.016} \quad (+0.1\sigma)$
$\tau$	$0.094^{+0.058}_{-0.054} \quad (+0.2\sigma)$	$\Omega_m h^3$	$0.0954^{+0.0015}_{-0.0016} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07181^{+0.00092}_{-0.00091} \quad (+0.0\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.356 \quad (+0.1\sigma)$	$\sigma_8$	$0.808^{+0.031}_{-0.033} \quad (+0.1\sigma)$	$H(0.57)$	$92.89^{+0.80}_{-0.84} \quad (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.11^{+0.11}_{-0.10} \quad (+0.2\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.015}_{-0.016} \quad (+0.0\sigma)$	$D_A(0.57)$	$1388^{+20}_{-19} \quad (+0.0\sigma)$
$n_s$	$0.974^{+0.013}_{-0.012} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.021}_{-0.022} \quad (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6752^{+0.0042}_{-0.0041} \quad (-0.0\sigma)$
$y_{\text{cal}}$	$1.0000^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.983^{+0.033}_{-0.035} \quad (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.471^{+0.013}_{-0.015} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$244^{+40}_{-50} \quad (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.464^{+0.065}_{-0.062} \quad (+0.0\sigma)$	$\sigma_8(0.57)$	$0.603^{+0.024}_{-0.026} \quad (+0.1\sigma)$
$A_{143}^{\text{PS}}$	$37^{+10}_{-10} \quad (-0.7\sigma)$	$z_{\text{re}}$	$11.2^{+4.6}_{-4.5} \quad (+0.2\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24630^{+0.00018}_{-0.00018} \quad (-4.1\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s$	$2.25^{+0.24}_{-0.22} \quad (+0.1\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-6} \quad (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.862^{+0.026}_{-0.026} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$105.9^{+4.0}_{-4.1} \quad (+0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.85 \quad (-0.9\sigma)$	$D_{40}$	$1220^{+23}_{-22} \quad (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.4\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.23}$	$D_{220}$	$5699^{+79}_{-78} \quad (-0.5\sigma)$	$\chi_{\text{lensing}}^2$	$9.9 \quad (\nu: 1.5) \quad (-0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2526^{+28}_{-27} \quad (-0.3\sigma)$	$\chi_{\text{lowl}}^2$	$13.09 \quad (\nu: 0.3) \quad (-0.5\sigma)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$815.1^{+9.9}_{-9.9} \quad (-0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.5 \quad (\nu: 16.7)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$n_{\text{s},0.002}$	$0.974^{+0.013}_{-0.012} \quad (+0.4\sigma)$	$\chi_{\text{H070p6}}^2$	$0.82 \quad (\nu: 0.1) \quad (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.36}$	$Y_{\text{P}}$	$0.24497^{+0.00018}_{-0.00018} \quad (-4.1\sigma)$	$\chi_{\text{JLA}}^2$	$706.72 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.22}$	$\text{Age/Gyr}$	$13.825^{+0.098}_{-0.091} \quad (+0.0\sigma)$	$\chi_{6\text{DF}}^2$	$0.055 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.97^{+0.34}_{-0.34}$	$z_*$	$1089.65^{+0.71}_{-0.74} \quad (-0.2\sigma)$	$\chi_{\text{MGS}}^2$	$1.54 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$c_{100}$	$0.9967^{+0.0020}_{-0.0019} \quad (-1.5\sigma)$	$r_*$	$145.21^{+0.82}_{-0.79} \quad (+0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.92 \quad (\nu: 0.3) \quad (-0.0\sigma)$
$c_{217}$	$0.9972^{+0.0036}_{-0.0035} \quad (+0.9\sigma)$	$100\theta_*$	$1.04147^{+0.00090}_{-0.00089} \quad (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.60 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$z_{\text{drag}}$	$1059.71^{+0.88}_{-0.92} \quad (+0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 5.8) \quad (+0.3\sigma)$
$H_0$	$67.7^{+1.3}_{-1.4} \quad (+0.0\sigma)$	$r_{\text{drag}}$	$147.89^{+0.83}_{-0.81} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$8084.5 \quad (\nu: 15.6) \quad (+1331.4\sigma)$
$\Omega_\Lambda$	$0.692^{+0.016}_{-0.017} \quad (+0.0\sigma)$	$k_D$	$0.14005^{+0.00092}_{-0.00089} \quad (+0.0\sigma)$	$\chi_{\text{BAO}}^2$	$5.1 \quad (\nu: 0.6) \quad (+0.0\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 8805.54; \Delta \bar{\chi}_{\text{eff}}^2 = 7282.31; R - 1 = 0.02741$$

### 7.32 base\_mnu\_CamSpecHM\_TTTEEE\_lowl\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022337	$0.02232^{+0.00035}_{-0.00035}$ $(+0.7\sigma)$	$\mathcal{C}_{EE}$	1.0011	$1.0008^{+0.0084}_{-0.0083}$	$z_*$	1089.85	$1089.93^{+0.70}_{-0.68}$ $(-0.7\sigma)$
$\Omega_c h^2$	0.11873	$0.1188^{+0.0031}_{-0.0030}$ $(-0.4\sigma)$	$\beta_1^1$	-0.04	$-0.1^{+1.9}_{-2.0}$	$r_*$	144.76	$144.69^{+0.67}_{-0.69}$ $(+0.2\sigma)$
$100\theta_{MC}$	1.04080	$1.04075^{+0.00064}_{-0.00065}$ $(+0.2\sigma)$	$H_0$	66.24	$65.2^{+3.9}_{-4.3}$ $(+0.2\sigma)$	$100\theta_*$	1.04109	$1.04108^{+0.00059}_{-0.00059}$ $(+0.2\sigma)$
$\tau$	0.085	$0.094^{+0.056}_{-0.051}$ $(+0.2\sigma)$	$\Omega_\Lambda$	0.673	$0.658^{+0.053}_{-0.062}$ $(+0.2\sigma)$	$z_{drag}$	1059.78	$1059.77^{+0.67}_{-0.63}$ $(+0.7\sigma)$
$\Sigma m_\nu$ [eV]	0.233	$< 0.767$ $(-0.1\sigma)$	$\Omega_m$	0.327	$0.342^{+0.062}_{-0.053}$ $(-0.2\sigma)$	$r_{drag}$	147.44	$147.37^{+0.65}_{-0.66}$ $(+0.1\sigma)$
$\ln(10^{10} A_s)$	3.099	$3.12^{+0.11}_{-0.096}$ $(+0.1\sigma)$	$\Omega_m h^2$	0.1436	$0.1448^{+0.0059}_{-0.0055}$ $(-0.3\sigma)$	$k_D$	0.14051	$0.14061^{+0.00071}_{-0.00069}$ $(+0.2\sigma)$
$n_s$	0.9683	$0.968^{+0.011}_{-0.010}$ $(+0.7\sigma)$	$\Omega_\nu h^2$	0.00251	$< 0.00824$ $(-0.1\sigma)$	$100\theta_D$	0.160797	$0.16077^{+0.00039}_{-0.00039}$ $(-0.9\sigma)$
$y_{cal}$	1.00014	$1.0001^{+0.0050}_{-0.0048}$ $(-0.0\sigma)$	$\Omega_m h^3$	0.09510	$0.0944^{+0.0024}_{-0.0028}$ $(+0.2\sigma)$	$z_{eq}$	3371	$3373^{+68}_{-68}$ $(-0.4\sigma)$
$A_{100}^{PS}$	248.6	$245^{+40}_{-40}$ $(-0.6\sigma)$	$\sigma_8$	0.792	$0.774^{+0.064}_{-0.072}$ $(+0.1\sigma)$	$100\theta_{eq}$	0.8189	$0.819^{+0.013}_{-0.013}$ $(+0.4\sigma)$
$A_{143}^{PS}$	34.8	$39^{+10}_{-10}$ $(-0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4528	$0.451^{+0.014}_{-0.015}$ $(-0.3\sigma)$	$r_{drag}/D_V(0.57)$	0.07076	$0.0701^{+0.0026}_{-0.0028}$ $(+0.2\sigma)$
$A_{217}^{PS}$	95.6	$98^{+30}_{-30}$ $(+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.5987	$0.591^{+0.030}_{-0.033}$ $(+0.0\sigma)$	$H(0.57)$	92.25	$91.8^{+2.0}_{-2.2}$ $(+0.2\sigma)$
$A_{217}^{CIB}$	47.3	$46^{+10}_{-10}$ $(-2.9\sigma)$	$\sigma_8/h^{0.5}$	0.973	$0.958^{+0.054}_{-0.061}$ $(+0.0\sigma)$	$D_A(0.57)$	1408	$1423^{+65}_{-58}$ $(-0.2\sigma)$
$A_{143}^{tSZ}$	3.22	$< 6.71$ $(-1.0\sigma)$	$\langle d^2 \rangle^{1/2}$	2.470	$2.487^{+0.097}_{-0.087}$ $(-0.2\sigma)$	$F_{AP}(0.57)$	0.6800	$0.683^{+0.015}_{-0.013}$ $(-0.2\sigma)$
$r_{143 \times 217}^{PS}$	0.407	$0.51^{+0.23}_{-0.21}$	$z_{re}$	10.63	$11.3^{+4.6}_{-4.8}$ $(+0.1\sigma)$	$f\sigma_8(0.57)$	0.4670	$0.460^{+0.024}_{-0.028}$ $(+0.1\sigma)$
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s$	2.218	$2.26^{+0.24}_{-0.23}$ $(+0.1\sigma)$	$\sigma_8(0.57)$	0.586	$0.571^{+0.056}_{-0.063}$ $(+0.1\sigma)$
$A^{kSZ}$	5.3	—	$10^9 A_s e^{-2\tau}$	1.8700	$1.869^{+0.024}_{-0.024}$ $(-0.6\sigma)$	$Y_P^{BBN}$	0.246288	$0.24628^{+0.00015}_{-0.00015}$ $(-4.5\sigma)$
$A_{100}^{dust}$	0.993	$0.99^{+0.38}_{-0.38}$	$D_{40}$	1227.7	$1227^{+23}_{-24}$ $(-0.8\sigma)$	$f_{2000}^{143}$	29.2	$29^{+5}_{-5}$ $(-0.6\sigma)$
$A_{143}^{dust}$	1.042	$1.03^{+0.36}_{-0.36}$	$D_{220}$	5709	$5710^{+76}_{-76}$ $(-0.5\sigma)$	$f_{2000}^{217}$	106.51	$106.3^{+3.7}_{-3.7}$ $(-0.1\sigma)$
$A_{217}^{dust}$	1.214	$1.21^{+0.23}_{-0.23}$	$D_{810}$	2528.2	$2529^{+27}_{-26}$ $(-0.4\sigma)$	$f_{2000}^{143 \times 217}$	31.61	$32^{+4}_{-4}$ $(-0.7\sigma)$
$A_{143 \times 217}^{dust}$	0.960	$0.98^{+0.35}_{-0.35}$	$D_{1420}$	814.4	$815.0^{+9.6}_{-9.1}$ $(+0.0\sigma)$	$\chi_{CamSpec}^2$	12937.6	$12954.3$ ( $\nu$ : 18.4)
$c_{100}$	0.99659	$0.9968^{+0.0019}_{-0.0019}$ $(-1.8\sigma)$	$n_{s,0.002}$	0.9683	$0.968^{+0.011}_{-0.010}$ $(+0.7\sigma)$	$\chi_{CMB}^2$	12960.0	$12978.0$ ( $\nu$ : 19.1) $(+1559.2\sigma)$
$c_{217}$	0.99724	$0.9971^{+0.0035}_{-0.0035}$ $(+0.7\sigma)$	$Y_P$	0.244957	$0.24495^{+0.00015}_{-0.00014}$ $(-4.6\sigma)$			
$c_{TE}$	1.0048	$1.0048^{+0.0088}_{-0.0086}$	Age/Gyr	13.884	$13.94^{+0.25}_{-0.22}$ $(-0.2\sigma)$			

Best-fit  $\chi_{eff}^2 = 12963.90$ ;  $\Delta\chi_{eff}^2 = 10498.52$ ;  $\bar{\chi}_{eff}^2 = 12987.02$ ;  $\Delta\bar{\chi}_{eff}^2 = 10489.19$ ;  $R - 1 = 0.01001$

$\chi_{eff}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 8.92 ( $\Delta$  -0.18) commander\_rc2\_v1.1\_l2\_29\_B: 13.50 ( $\Delta$  -0.84) CamSpec like\_v9.10CMH\_unified: 12937.62

### 7.33 base\_mnu\_CamSpecHM\_TTTEEE\_lowl\_lensing\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00032}_{-0.00031} (+0.6\sigma)$	$H_0$	$67.5^{+1.3}_{-1.4} (+0.2\sigma)$	$r_{\text{drag}}$	$147.54^{+0.58}_{-0.54} (-0.0\sigma)$
$\Omega_c h^2$	$0.1182^{+0.0024}_{-0.0026} (-0.3\sigma)$	$\Omega_\Lambda$	$0.689^{+0.016}_{-0.017} (+0.2\sigma)$	$k_D$	$0.14043^{+0.00063}_{-0.00065} (+0.3\sigma)$
$100\theta_{\text{MC}}$	$1.04093^{+0.00056}_{-0.00058} (+0.1\sigma)$	$\Omega_m$	$0.311^{+0.017}_{-0.016} (-0.2\sigma)$	$100\theta_D$	$0.16076^{+0.00038}_{-0.00038} (-0.8\sigma)$
$\tau$	$0.077^{+0.043}_{-0.042} (+0.2\sigma)$	$\Omega_m h^2$	$0.1419^{+0.0020}_{-0.0021} (-0.1\sigma)$	$z_{\text{eq}}$	$3359^{+55}_{-58} (-0.2\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.279 (+0.2\sigma)$	$\Omega_\nu h^2$	$< 0.00300 (+0.2\sigma)$	$100\theta_{\text{eq}}$	$0.821^{+0.011}_{-0.011} (+0.3\sigma)$
$\ln(10^{10} A_s)$	$3.082^{+0.080}_{-0.077} (+0.2\sigma)$	$\Omega_m h^3$	$0.0958^{+0.0010}_{-0.0012} (+0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07160^{+0.00087}_{-0.00088} (+0.1\sigma)$
$n_s$	$0.9701^{+0.0096}_{-0.0092} (+0.6\sigma)$	$\sigma_8$	$0.809^{+0.027}_{-0.029} (-0.1\sigma)$	$H(0.57)$	$92.91^{+0.71}_{-0.77} (+0.1\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0049}_{-0.0048} (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.013}_{-0.013} (-0.3\sigma)$	$D_A(0.57)$	$1389^{+20}_{-18} (-0.2\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.017}_{-0.018} (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6760^{+0.0042}_{-0.0040} (-0.2\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} (-0.7\sigma)$	$\sigma_8/h^{0.5}$	$0.984^{+0.029}_{-0.029} (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.471^{+0.012}_{-0.013} (-0.2\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} (+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.453^{+0.057}_{-0.060} (-0.2\sigma)$	$\sigma_8(0.57)$	$0.602^{+0.022}_{-0.023} (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} (-2.8\sigma)$	$z_{\text{re}}$	$9.7^{+3.8}_{-3.7} (+0.2\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24631^{+0.00013}_{-0.00013} (-5.7\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.72 (-1.1\sigma)$	$10^9 A_s$	$2.18^{+0.18}_{-0.17} (+0.2\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} (-0.5\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$10^9 A_s e^{-2\tau}$	$1.868^{+0.022}_{-0.022} (-0.5\sigma)$	$f_{2000}^{217}$	$106.0^{+3.8}_{-3.7} (+0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1223^{+22}_{-22} (-0.7\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} (-0.6\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5711^{+75}_{-76} (-0.4\sigma)$	$\chi_{\text{lensing}}^2$	$9.98 (\nu: 1.3) (-0.2\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.39}$	$D_{810}$	$2528^{+27}_{-25} (-0.3\sigma)$	$\chi_{\text{lowl}}^2$	$13.23 (\nu: 0.3) (-0.7\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.37}_{-0.36}$	$D_{1420}$	$815.0^{+9.5}_{-9.1} (+0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$12953.9 (\nu: 19.1)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.22}$	$n_{s,0.002}$	$0.9701^{+0.0096}_{-0.0092} (+0.6\sigma)$	$\chi_{6\text{DF}}^2$	$0.08 (\nu: 0.0) (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$Y_{\text{P}}$	$0.24498^{+0.00014}_{-0.00014} (-5.8\sigma)$	$\chi_{\text{MGS}}^2$	$1.27 (\nu: 0.2) (+0.1\sigma)$
$c_{100}$	$0.9967^{+0.0019}_{-0.0019} (-1.8\sigma)$	$\text{Age/Gyr}$	$13.815^{+0.086}_{-0.077} (-0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$3.00 (\nu: 0.4) (-0.1\sigma)$
$c_{217}$	$0.9971^{+0.0034}_{-0.0035} (+0.7\sigma)$	$z_*$	$1089.72^{+0.54}_{-0.52} (-0.6\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.86 (\nu: 0.2) (-0.1\sigma)$
$c_{TE}$	$1.0049^{+0.0087}_{-0.0085}$	$r_*$	$144.88^{+0.57}_{-0.54} (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$9.1 (\nu: 6.4) (-1.9\sigma)$
$c_{EE}$	$1.0014^{+0.0083}_{-0.0081}$	$100\theta_*$	$1.04116^{+0.00056}_{-0.00058} (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$12977.1 (\nu: 18.3) (+1584.9\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	$1059.86^{+0.69}_{-0.65} (+0.6\sigma)$	$\chi_{\text{BAO}}^2$	$5.2 (\nu: 0.8) (-0.1\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 12991.43; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.73; R - 1 = 0.02543$$

### 7.34 base\_mnu\_CamSpecHM\_TTTEEE\_lowl\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02241^{+0.00032}_{-0.00031} \quad (+0.6\sigma)$	$\Omega_\Lambda$	$0.691^{+0.015}_{-0.015} \quad (+0.2\sigma)$	$100\theta_D$	$0.16076^{+0.00037}_{-0.00038} \quad (-0.8\sigma)$
$\Omega_c h^2$	$0.1181^{+0.0024}_{-0.0025} \quad (-0.3\sigma)$	$\Omega_m$	$0.309^{+0.015}_{-0.015} \quad (-0.2\sigma)$	$z_{\text{eq}}$	$3357^{+54}_{-56} \quad (-0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04095^{+0.00056}_{-0.00058} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1416^{+0.0020}_{-0.0020} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.822^{+0.011}_{-0.010} \quad (+0.3\sigma)$
$\tau$	$0.076^{+0.041}_{-0.040} \quad (+0.2\sigma)$	$\Omega_\nu h^2$	$< 0.00276 \quad (+0.2\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07172^{+0.00083}_{-0.00083} \quad (+0.1\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.256 \quad (+0.2\sigma)$	$\Omega_m h^3$	$0.09589^{+0.00098}_{-0.0011} \quad (+0.1\sigma)$	$H(0.57)$	$93.00^{+0.67}_{-0.72} \quad (+0.2\sigma)$
$\ln(10^{10} A_s)$	$3.080^{+0.078}_{-0.074} \quad (+0.2\sigma)$	$\sigma_8$	$0.811^{+0.026}_{-0.028} \quad (-0.1\sigma)$	$D_A(0.57)$	$1387^{+18}_{-16} \quad (-0.2\sigma)$
$n_s$	$0.9704^{+0.0094}_{-0.0090} \quad (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.013} \quad (-0.3\sigma)$	$F_{\text{AP}}(0.57)$	$0.6754^{+0.0039}_{-0.0037} \quad (-0.2\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0049}_{-0.0048} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.016}_{-0.017} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.472^{+0.012}_{-0.012} \quad (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.986^{+0.028}_{-0.028} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.604^{+0.021}_{-0.022} \quad (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} \quad (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.452^{+0.056}_{-0.059} \quad (-0.2\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24632^{+0.00013}_{-0.00014} \quad (-5.8\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$9.7^{+3.6}_{-3.6} \quad (+0.2\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.18^{+0.17}_{-0.16} \quad (+0.2\sigma)$	$f_{2000}^{217}$	$106.0^{+3.9}_{-3.7} \quad (+0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.72 \quad (-1.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.868^{+0.022}_{-0.022} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.22}$	$D_{40}$	$1223^{+22}_{-22} \quad (-0.7\sigma)$	$\chi_{\text{lensing}}^2$	$10.0 (\nu: 1.4) \quad (-0.2\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5711^{+76}_{-76} \quad (-0.4\sigma)$	$\chi_{\text{lowl}}^2$	$13.18 (\nu: 0.3) \quad (-0.6\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2528^{+27}_{-25} \quad (-0.3\sigma)$	$\chi_{\text{CamSpec}}^2$	$12953.9 (\nu: 19.3)$
$A_{100}^{\text{dust}}$	$0.98^{+0.38}_{-0.39}$	$D_{1420}$	$815.1^{+9.4}_{-9.1} \quad (+0.1\sigma)$	$\chi_{\text{H070p6}}^2$	$0.80 (\nu: 0.1) \quad (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.37}_{-0.36}$	$n_{s,0.002}$	$0.9704^{+0.0094}_{-0.0090} \quad (+0.6\sigma)$	$\chi_{\text{JLA}}^2$	$706.73 (\nu: 0.0) \quad (-0.1\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.22}$	$Y_{\text{P}}$	$0.24499^{+0.00014}_{-0.00013} \quad (-5.9\sigma)$	$\chi_{6\text{DF}}^2$	$0.054 (\nu: 0.0) \quad (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.34}$	$\text{Age}/\text{Gyr}$	$13.805^{+0.080}_{-0.072} \quad (-0.1\sigma)$	$\chi_{\text{MGS}}^2$	$1.42 (\nu: 0.1) \quad (+0.2\sigma)$
$c_{100}$	$0.9967^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.69^{+0.53}_{-0.52} \quad (-0.6\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.86 (\nu: 0.2) \quad (-0.0\sigma)$
$c_{217}$	$0.9971^{+0.0034}_{-0.0035} \quad (+0.7\sigma)$	$r_*$	$144.90^{+0.55}_{-0.52} \quad (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.67 (\nu: 0.2) \quad (-0.1\sigma)$
$c_{TE}$	$1.0048^{+0.0088}_{-0.0085}$	$100\theta_*$	$1.04117^{+0.00056}_{-0.00058} \quad (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$9.1 (\nu: 6.3) \quad (-1.9\sigma)$
$c_{EE}$	$1.0014^{+0.0082}_{-0.0080}$	$z_{\text{drag}}$	$1059.88^{+0.67}_{-0.63} \quad (+0.6\sigma)$	$\chi_{\text{CMB}}^2$	$12977.1 (\nu: 18.5) \quad (+1592.3\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_{\text{drag}}$	$147.56^{+0.57}_{-0.52} \quad (-0.0\sigma)$	$\chi_{\text{BAO}}^2$	$5.01 (\nu: 0.5) \quad (-0.0\sigma)$
$H_0$	$67.7^{+1.2}_{-1.3} \quad (+0.2\sigma)$	$k_D$	$0.14042^{+0.00063}_{-0.00064} \quad (+0.3\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 13698.75; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.64; R - 1 = 0.03447$$

### 7.35 base\_mnu\_plikHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02230	$0.02211^{+0.00050}_{-0.00052}$	$\Omega_m$	0.299	$0.344^{+0.075}_{-0.063}$	$100\theta_*$	1.04128	$1.04102^{+0.00093}_{-0.00094}$
$\Omega_c h^2$	0.11815	$0.1199^{+0.0047}_{-0.0046}$	$\Omega_m h^2$	0.1405	$0.1451^{+0.0078}_{-0.0070}$	$D_A/\text{Gpc}$	13.922	$13.890^{+0.092}_{-0.099}$
$100\theta_{\text{MC}}$	1.04112	$1.0407^{+0.0010}_{-0.0010}$	$\Omega_\nu h^2$	0.00004	$< 0.00725$	$z_{\text{drag}}$	1059.67	$1059.36^{+0.95}_{-1.0}$
$\tau$	0.0637	$0.075^{+0.036}_{-0.036}$	$\Omega_m h^3$	0.09628	$0.0945^{+0.0024}_{-0.0028}$	$r_{\text{drag}}$	147.66	$147.35^{+0.96}_{-1.0}$
$\Sigma m_\nu [\text{eV}]$	0.003	$< 0.675$	$\sigma_8$	0.825	$0.776^{+0.062}_{-0.073}$	$k_D$	0.14021	$0.1404^{+0.0011}_{-0.0010}$
$\ln(10^{10} A_s)$	3.057	$3.083^{+0.068}_{-0.067}$	$\sigma_8 \Omega_m^{0.5}$	0.4511	$0.454^{+0.018}_{-0.017}$	$100\theta_D$	0.16094	$0.16105^{+0.00055}_{-0.00053}$
$n_s$	0.9692	$0.964^{+0.013}_{-0.014}$	$\sigma_8 \Omega_m^{0.25}$	0.6100	$0.593^{+0.027}_{-0.031}$	$z_{\text{eq}}$	3357	$3393^{+110}_{-97}$
$y_{\text{cal}}$	1.0000	$1.0003^{+0.0050}_{-0.0050}$	$\sigma_8/h^{0.5}$	0.996	$0.961^{+0.050}_{-0.059}$	$k_{\text{eq}}$	0.010244	$0.01036^{+0.00033}_{-0.00030}$
$A_{217}^{\text{CIB}}$	67.4	$65^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.443	$2.471^{+0.076}_{-0.071}$	$100\theta_{\text{eq}}$	0.8215	$0.815^{+0.019}_{-0.019}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$z_{\text{re}}$	8.59	$9.7^{+3.5}_{-3.5}$	$100\theta_{s,\text{eq}}$	0.4537	$0.4503^{+0.0095}_{-0.0099}$
$A_{143}^{\text{tSZ}}$	7.35	$4.9^{+3.8}_{-3.8}$	$10^9 A_s$	2.127	$2.18^{+0.15}_{-0.14}$	$r_{\text{drag}}/D_V(0.57)$	0.07228	$0.0701^{+0.0030}_{-0.0034}$
$A_{100}^{\text{PS}}$	251	$262^{+50}_{-60}$	$10^9 A_s e^{-2\tau}$	1.8721	$1.879^{+0.027}_{-0.027}$	$H(0.57)$	93.43	$91.8^{+2.1}_{-2.4}$
$A_{143}^{\text{PS}}$	38.1	$46^{+20}_{-20}$	$D_{40}$	1221.7	$1232^{+27}_{-26}$	$D_A(0.57)$	1375	$1423^{+74}_{-65}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$D_{220}$	5716	$5715^{+81}_{-83}$	$F_{\text{AP}}(0.57)$	0.6729	$0.684^{+0.018}_{-0.015}$
$A_{217}^{\text{PS}}$	96.8	$97^{+20}_{-20}$	$D_{810}$	2531.8	$2534^{+28}_{-28}$	$f\sigma_8(0.57)$	0.4752	$0.461^{+0.023}_{-0.028}$
$A^{\text{kSZ}}$	0.0	—	$D_{1420}$	815.1	$814^{+10}_{-10}$	$\sigma_8(0.57)$	0.616	$0.572^{+0.056}_{-0.066}$
$A_{100}^{\text{dustTT}}$	7.47	$7.5^{+3.7}_{-3.7}$	$D_{2000}$	230.35	$229.5^{+3.8}_{-3.8}$	$f_{2000}^{143}$	29.6	$31^{+6}_{-6}$
$A_{143}^{\text{dustTT}}$	9.08	$9.0^{+3.6}_{-3.6}$	$n_{s,0.002}$	0.9692	$0.964^{+0.013}_{-0.014}$	$f_{2000}^{143 \times 217}$	32.30	$33^{+4}_{-4}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.2}_{-8.2}$	$Y_P$	0.245364	$0.24527^{+0.00024}_{-0.00024}$	$f_{2000}^{217}$	105.91	$106.9^{+4.2}_{-4.1}$
$A_{217}^{\text{dustTT}}$	81.8	$82^{+10}_{-10}$	$Y_P^{\text{BBN}}$	0.246691	$0.24660^{+0.00024}_{-0.00024}$	$\chi_{\text{lensing}}^2$	9.38	$9.5 (\nu: 0.9)$
$c_{100}$	0.99789	$0.9979^{+0.0015}_{-0.0015}$	$10^5 \text{D}/\text{H}$	2.604	$2.64^{+0.10}_{-0.10}$	$\chi_{\text{lowTEB}}^2$	10494.67	$10496.6 (\nu: 1.7)$
$c_{217}$	0.99593	$0.9961^{+0.0029}_{-0.0029}$	$\text{Age}/\text{Gyr}$	13.762	$13.94^{+0.27}_{-0.23}$	$\chi_{\text{plik}}^2$	766.3	$779.8 (\nu: 15.0)$
$H_0$	68.53	$65.2^{+4.5}_{-5.0}$	$z_*$	1089.84	$1090.3^{+1.1}_{-1.1}$	$\chi_{\text{prior}}^2$	2.2	$7.5 (\nu: 6.6)$
$\Omega_\Lambda$	0.701	$0.656^{+0.063}_{-0.075}$	$r_*$	144.97	$144.6^{+1.0}_{-1.1}$	$\chi_{\text{CMB}}^2$	11270.3	$11285.9 (\nu: 15.9)$

Best-fit  $\chi_{\text{eff}}^2 = 11272.57$ ;  $\bar{\chi}_{\text{eff}}^2 = 11293.42$ ;  $R - 1 = 0.00753$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.38 lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.67 plik\_dx11dr2\_HM\_v18.TT: 766.29

### 7.36 base\_mnu\_plikHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022254	$0.02219^{+0.00033}_{-0.00034}$	$A_{100 \times 217}^{\text{dust}TE}$	0.301	$0.30^{+0.17}_{-0.17}$	$10^5 \text{D/H}$	2.613	$2.625^{+0.067}_{-0.062}$
$\Omega_c h^2$	0.11935	$0.1198^{+0.0031}_{-0.0030}$	$A_{143}^{\text{dust}TE}$	0.155	$0.15^{+0.11}_{-0.10}$	Age/Gyr	13.834	$13.91^{+0.22}_{-0.18}$
$100\theta_{\text{MC}}$	1.04080	$1.04069^{+0.00066}_{-0.00069}$	$A_{143 \times 217}^{\text{dust}TE}$	0.338	$0.34^{+0.16}_{-0.16}$	$z_*$	1090.01	$1090.17^{+0.73}_{-0.65}$
$\tau$	0.0667	$0.074^{+0.034}_{-0.033}$	$A_{217}^{\text{dust}TE}$	1.67	$1.68^{+0.50}_{-0.50}$	$r_*$	144.69	$144.56^{+0.68}_{-0.71}$
$\Sigma m_\nu [\text{eV}]$	0.117	$< 0.589$	$c_{100}$	0.99815	$0.9981^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04103	$1.04098^{+0.00061}_{-0.00063}$
$\ln(10^{10} A_s)$	3.066	$3.081^{+0.066}_{-0.062}$	$c_{217}$	0.99607	$0.9961^{+0.0029}_{-0.0028}$	$D_A/\text{Gpc}$	13.898	$13.887^{+0.063}_{-0.065}$
$n_s$	0.9654	$0.9637^{+0.0098}_{-0.0099}$	$H_0$	67.01	$65.6^{+3.5}_{-4.0}$	$z_{\text{drag}}$	1059.63	$1059.54^{+0.63}_{-0.63}$
$y_{\text{cal}}$	1.00002	$1.0003^{+0.0049}_{-0.0049}$	$\Omega_\Lambda$	0.682	$0.662^{+0.047}_{-0.057}$	$r_{\text{drag}}$	147.39	$147.29^{+0.66}_{-0.68}$
$A_{217}^{\text{CIB}}$	68.1	$65^{+10}_{-10}$	$\Omega_m$	0.318	$0.338^{+0.057}_{-0.047}$	$k_D$	0.14046	$0.14055^{+0.00069}_{-0.00068}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m h^2$	0.1429	$0.1447^{+0.0058}_{-0.0051}$	$100\theta_D$	0.160924	$0.16095^{+0.00036}_{-0.00036}$
$A_{143}^{\text{tSZ}}$	7.25	$5.2^{+3.7}_{-3.9}$	$\Omega_\nu h^2$	0.00126	$< 0.00633$	$z_{\text{eq}}$	3384	$3394^{+68}_{-66}$
$A_{100}^{\text{PS}}$	258	$263^{+50}_{-50}$	$\Omega_m h^3$	0.09573	$0.0949^{+0.0020}_{-0.0024}$	$k_{\text{eq}}$	0.010328	$0.01036^{+0.00021}_{-0.00020}$
$A_{143}^{\text{PS}}$	39.1	$44^{+10}_{-20}$	$\sigma_8$	0.807	$0.783^{+0.054}_{-0.065}$	$100\theta_{\text{eq}}$	0.8162	$0.815^{+0.013}_{-0.013}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4554	$0.454^{+0.014}_{-0.014}$	$100\theta_{s,\text{eq}}$	0.4510	$0.4501^{+0.0065}_{-0.0064}$
$A_{217}^{\text{PS}}$	96.5	$97^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6064	$0.597^{+0.025}_{-0.029}$	$r_{\text{drag}}/D_V(0.57)$	0.07123	$0.0703^{+0.0023}_{-0.0026}$
$A^{\text{kSZ}}$	0.0	—	$\sigma_8/h^{0.5}$	0.986	$0.967^{+0.046}_{-0.054}$	$H(0.57)$	92.69	$92.0^{+1.7}_{-2.0}$
$A_{100}^{\text{dust}TT}$	7.50	$7.5^{+3.7}_{-3.6}$	$\langle d^2 \rangle^{1/2}$	2.457	$2.472^{+0.067}_{-0.063}$	$D_A(0.57)$	1396	$1417^{+59}_{-50}$
$A_{143}^{\text{dust}TT}$	9.05	$9.0^{+3.6}_{-3.6}$	$z_{\text{re}}$	8.92	$9.6^{+3.1}_{-3.3}$	$F_{\text{AP}}(0.57)$	0.6777	$0.682^{+0.014}_{-0.012}$
$A_{143 \times 217}^{\text{dust}TT}$	17.5	$17.2^{+8.1}_{-8.2}$	$10^9 A_s$	2.146	$2.18^{+0.15}_{-0.13}$	$f\sigma_8(0.57)$	0.4723	$0.464^{+0.021}_{-0.025}$
$A_{217}^{\text{dust}TT}$	81.5	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8781	$1.880^{+0.024}_{-0.023}$	$\sigma_8(0.57)$	0.599	$0.578^{+0.047}_{-0.057}$
$A_{100}^{\text{dust}EE}$	0.0814	$0.081^{+0.011}_{-0.011}$	$D_{40}$	1232.4	$1236^{+23}_{-24}$	$f_{2000}^{143}$	30.0	$31^{+5}_{-5}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0492	$0.0488^{+0.0099}_{-0.0098}$	$D_{220}$	5723	$5728^{+77}_{-75}$	$f_{2000}^{143 \times 217}$	32.70	$33^{+4}_{-4}$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.100^{+0.064}_{-0.063}$	$D_{810}$	2533.9	$2536^{+27}_{-26}$	$f_{2000}^{217}$	106.19	$106.6^{+3.7}_{-3.6}$
$A_{143}^{\text{dust}EE}$	0.1004	$0.100^{+0.013}_{-0.013}$	$D_{1420}$	814.6	$814.8^{+9.4}_{-9.2}$	$\chi^2_{\text{lensing}}$	9.69	$9.8 (\nu: 1.2)$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.224^{+0.092}_{-0.091}$	$D_{2000}$	230.00	$229.8^{+3.1}_{-3.1}$	$\chi^2_{\text{lowTEB}}$	10495.48	$10496.7 (\nu: 1.5)$
$A_{217}^{\text{dust}EE}$	0.653	$0.65^{+0.25}_{-0.25}$	$n_{s,0.002}$	0.9654	$0.9637^{+0.0098}_{-0.0099}$	$\chi^2_{\text{plik}}$	2435.1	$2454.3 (\nu: 22.7)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.075}_{-0.075}$	$Y_P$	0.245342	$0.24531^{+0.00015}_{-0.00016}$	$\chi^2_{\text{prior}}$	7.1	$19.4 (\nu: 15.2)$
$A_{100 \times 143}^{\text{dust}TE}$	0.133	$0.131^{+0.057}_{-0.056}$	$Y_P^{\text{BBN}}$	0.246668	$0.24664^{+0.00015}_{-0.00016}$	$\chi^2_{\text{CMB}}$	12940.2	$12960.8 (\nu: 22.8)$

Best-fit  $\chi^2_{\text{eff}} = 12947.35$ ;  $\bar{\chi}^2_{\text{eff}} = 12980.23$ ;  $R - 1 = 0.00848$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.69 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.48 plik\_dx11dr2\_HM\_v18.TTTEEE: 2435.05

### 7.37 base\_mnu\_CamSpecHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02228	$0.02214^{+0.00052}_{-0.00052}$ (+0.1 $\sigma$ )	$H_0$	68.55	$65.5^{+4.4}_{-5.1}$ (+0.1 $\sigma$ )	$100\theta_*$	1.04132	$1.04111^{+0.00094}_{-0.00094}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	0.11809	$0.1196^{+0.0047}_{-0.0045}$ (-0.1 $\sigma$ )	$\Omega_\Lambda$	0.701	$0.661^{+0.061}_{-0.076}$ (+0.1 $\sigma$ )	$z_{\text{drag}}$	1059.59	$1059.40^{+0.99}_{-0.95}$ (+0.1 $\sigma$ )
$100\theta_{\text{MC}}$	1.04114	$1.0408^{+0.0010}_{-0.0010}$ (+0.2 $\sigma$ )	$\Omega_m$	0.299	$0.339^{+0.076}_{-0.061}$ (-0.1 $\sigma$ )	$r_{\text{drag}}$	147.70	$147.40^{+0.97}_{-1.0}$ (+0.1 $\sigma$ )
$\tau$	0.0658	$0.078^{+0.036}_{-0.035}$ (+0.2 $\sigma$ )	$\Omega_m h^2$	0.1404	$0.1446^{+0.0078}_{-0.0070}$ (-0.1 $\sigma$ )	$k_D$	0.14017	$0.1404^{+0.0010}_{-0.0010}$ (-0.0 $\sigma$ )
$\Sigma m_\nu$ [eV]	0.001	< 0.671 (-0.1 $\sigma$ )	$\Omega_\nu h^2$	0.00001	< 0.00721 (-0.1 $\sigma$ )	$100\theta_D$	0.16096	$0.16102^{+0.00054}_{-0.00054}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.060	$3.086^{+0.069}_{-0.065}$ (+0.1 $\sigma$ )	$\Omega_m h^3$	0.09623	$0.0946^{+0.0023}_{-0.0029}$ (+0.1 $\sigma$ )	$z_{\text{eq}}$	3355	$3386^{+100}_{-99}$ (-0.1 $\sigma$ )
$n_s$	0.9700	$0.967^{+0.013}_{-0.014}$ (+0.4 $\sigma$ )	$\sigma_8$	0.826	$0.781^{+0.061}_{-0.075}$ (+0.1 $\sigma$ )	$100\theta_{\text{eq}}$	0.8218	$0.816^{+0.019}_{-0.019}$ (+0.1 $\sigma$ )
$y_{\text{cal}}$	1.00030	$1.0003^{+0.0049}_{-0.0050}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4516	$0.453^{+0.017}_{-0.017}$ (-0.0 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07231	$0.0703^{+0.0030}_{-0.0034}$ (+0.1 $\sigma$ )
$A_{100}^{\text{PS}}$	248.6	$249^{+40}_{-40}$ (-0.5 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6109	$0.595^{+0.027}_{-0.032}$ (+0.1 $\sigma$ )	$H(0.57)$	93.43	$91.9^{+2.1}_{-2.4}$ (+0.1 $\sigma$ )
$A_{143}^{\text{PS}}$	36.1	$40^{+20}_{-20}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	0.998	$0.965^{+0.050}_{-0.060}$ (+0.1 $\sigma$ )	$D_A(0.57)$	1375	$1419^{+76}_{-63}$ (-0.1 $\sigma$ )
$A_{217}^{\text{PS}}$	96.3	$97^{+30}_{-30}$ (+0.0 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.444	$2.468^{+0.075}_{-0.069}$ (-0.1 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6728	$0.683^{+0.018}_{-0.015}$ (-0.1 $\sigma$ )
$A_{217}^{\text{CIB}}$	48.1	$47^{+10}_{-10}$ (-2.7 $\sigma$ )	$z_{\text{re}}$	8.79	$9.99^{+3.2}_{-3.4}$ (+0.2 $\sigma$ )	$f\sigma_8(0.57)$	0.4759	$0.463^{+0.022}_{-0.028}$ (+0.1 $\sigma$ )
$A_{143}^{\text{tSZ}}$	3.71	< 6.46 (-0.9 $\sigma$ )	$10^9 A_s$	2.132	$2.19^{+0.15}_{-0.15}$ (+0.1 $\sigma$ )	$\sigma_8(0.57)$	0.617	$0.577^{+0.055}_{-0.068}$ (+0.1 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.433	$0.51^{+0.22}_{-0.20}$	$10^9 A_s e^{-2\tau}$	1.8689	$1.873^{+0.027}_{-0.027}$ (-0.4 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246265	$0.24620^{+0.00022}_{-0.00023}$ (-3.3 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1218.3	$1225^{+26}_{-25}$ (-0.6 $\sigma$ )	$f_{2000}^{143}$	29.4	$30^{+6}_{-6}$ (-0.5 $\sigma$ )
$A^{\text{kSZ}}$	4.4	—	$D_{220}$	5702	$5695^{+81}_{-80}$ (-0.5 $\sigma$ )	$f_{2000}^{217}$	106.73	$107.1^{+4.1}_{-4.1}$ (+0.1 $\sigma$ )
$A_{100}^{\text{dust}}$	0.983	$0.99^{+0.38}_{-0.37}$	$D_{810}$	2528.6	$2530^{+28}_{-27}$ (-0.3 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.99	$33^{+4}_{-4}$ (-0.4 $\sigma$ )
$A_{143}^{\text{dust}}$	1.028	$1.03^{+0.35}_{-0.36}$	$D_{1420}$	814.4	$814^{+10}_{-10}$ (-0.0 $\sigma$ )	$\chi_{\text{lensing}}^2$	9.23	9.4 ( $\nu$ : 0.8) (-0.0 $\sigma$ )
$A_{217}^{\text{dust}}$	1.214	$1.21^{+0.23}_{-0.23}$	$n_{\text{s},0.002}$	0.9700	$0.967^{+0.013}_{-0.014}$ (+0.4 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10494.43	10496.2 ( $\nu$ : 1.8) (-0.3 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.980	$0.99^{+0.35}_{-0.35}$	$Y_{\text{P}}$	0.244935	$0.24488^{+0.00023}_{-0.00023}$ (-3.3 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	8047.4	8061.7 ( $\nu$ : 16.6)
$c_{100}$	0.99674	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	Age/Gyr	13.762	$13.93^{+0.27}_{-0.23}$ (-0.1 $\sigma$ )	$\chi_{\text{prior}}^2$	3.4	8.5 ( $\nu$ : 6.1) (+0.3 $\sigma$ )
$c_{217}$	0.99733	$0.9974^{+0.0034}_{-0.0035}$ (+0.9 $\sigma$ )	$z_*$	1089.84	$1090.2^{+1.1}_{-1.1}$ (-0.2 $\sigma$ )	$\chi_{\text{CMB}}^2$	18551.0	18567.3 ( $\nu$ : 17.7) (+1291.4 $\sigma$ )
$\beta_1^1$	-0.03	$-0.1^{+1.9}_{-2.0}$	$r_*$	145.00	$144.7^{+1.0}_{-1.1}$ (+0.1 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 18554.42$ ;  $\Delta\chi_{\text{eff}}^2 = 7281.85$ ;  $\bar{\chi}_{\text{eff}}^2 = 18575.74$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7282.32$ ;  $R - 1 = 0.00619$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.23 ( $\Delta$  -0.15) low1.SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.43 ( $\Delta$  -0.24) CamSpec like\_v9.10CMH\_unified: 8047.38

### 7.38 base\_mnu\_CamSpecHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022346	$0.02231^{+0.00033}_{-0.00034}$ (+0.7 $\sigma$ )	$\beta_1^1$	-0.20	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	1.04108	$1.04104^{+0.00059}_{-0.00058}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	0.11882	$0.1191^{+0.0029}_{-0.0029}$ (-0.4 $\sigma$ )	$H_0$	67.49	$66.2^{+3.1}_{-3.7}$ (+0.3 $\sigma$ )	$z_{\text{drag}}$	1059.78	$1059.74^{+0.66}_{-0.64}$ (+0.6 $\sigma$ )
$100\theta_{\text{MC}}$	1.04086	$1.04076^{+0.00064}_{-0.00064}$ (+0.2 $\sigma$ )	$\Omega_\Lambda$	0.6879	$0.671^{+0.042}_{-0.051}$ (+0.3 $\sigma$ )	$r_{\text{drag}}$	147.43	$147.35^{+0.65}_{-0.63}$ (+0.2 $\sigma$ )
$\tau$	0.0678	$0.076^{+0.034}_{-0.031}$ (+0.1 $\sigma$ )	$\Omega_m$	0.3121	$0.329^{+0.051}_{-0.042}$ (-0.3 $\sigma$ )	$k_D$	0.14050	$0.14059^{+0.00068}_{-0.00068}$ (+0.1 $\sigma$ )
$\Sigma m_\nu$ [eV]	0.094	< 0.529 (-0.2 $\sigma$ )	$\Omega_m h^2$	0.1422	$0.1438^{+0.0053}_{-0.0047}$ (-0.3 $\sigma$ )	$100\theta_D$	0.160807	$0.16081^{+0.00038}_{-0.00036}$ (-0.8 $\sigma$ )
$\ln(10^{10} A_s)$	3.066	$3.082^{+0.065}_{-0.059}$ (+0.0 $\sigma$ )	$\Omega_\nu h^2$	0.00101	< 0.00568 (-0.2 $\sigma$ )	$z_{\text{eq}}$	3373	$3380^{+64}_{-65}$ (-0.4 $\sigma$ )
$n_s$	0.9679	$0.9674^{+0.0098}_{-0.0096}$ (+0.7 $\sigma$ )	$\Omega_m h^3$	0.09596	$0.0952^{+0.0018}_{-0.0021}$ (+0.3 $\sigma$ )	$100\theta_{\text{eq}}$	0.8184	$0.817^{+0.012}_{-0.012}$ (+0.4 $\sigma$ )
$y_{\text{cal}}$	1.00053	$1.0002^{+0.0049}_{-0.0049}$ (-0.0 $\sigma$ )	$\sigma_8$	0.811	$0.789^{+0.049}_{-0.059}$ (+0.2 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07155	$0.0707^{+0.0021}_{-0.0024}$ (+0.3 $\sigma$ )
$A_{100}^{\text{PS}}$	246.8	$246^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4532	$0.452^{+0.013}_{-0.013}$ (-0.3 $\sigma$ )	$H(0.57)$	92.94	$92.3^{+1.6}_{-1.8}$ (+0.3 $\sigma$ )
$A_{143}^{\text{PS}}$	35.1	$39^{+10}_{-10}$ (-0.7 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6064	$0.597^{+0.023}_{-0.027}$ (+0.0 $\sigma$ )	$D_A(0.57)$	1389.3	$1408^{+53}_{-45}$ (-0.3 $\sigma$ )
$A_{217}^{\text{PS}}$	95.9	$98^{+30}_{-30}$ (+0.1 $\sigma$ )	$\sigma_8/h^{0.5}$	0.9875	$0.970^{+0.042}_{-0.050}$ (+0.1 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6762	$0.680^{+0.012}_{-0.010}$ (-0.3 $\sigma$ )
$A_{217}^{\text{CIB}}$	48.1	$46^{+10}_{-10}$ (-2.8 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.448	$2.459^{+0.064}_{-0.057}$ (-0.4 $\sigma$ )	$f\sigma_8(0.57)$	0.4726	$0.465^{+0.018}_{-0.022}$ (+0.1 $\sigma$ )
$A_{143}^{\text{tSZ}}$	3.80	< 6.64 (-1.0 $\sigma$ )	$z_{\text{re}}$	8.99	$9.7^{+3.0}_{-3.0}$ (+0.1 $\sigma$ )	$\sigma_8(0.57)$	0.6037	$0.584^{+0.043}_{-0.052}$ (+0.2 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.425	$0.51^{+0.23}_{-0.21}$	$10^9 A_s$	2.145	$2.18^{+0.14}_{-0.14}$ (+0.0 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246292	$0.24628^{+0.00014}_{-0.00015}$ (-4.5 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8730	$1.873^{+0.023}_{-0.023}$ (-0.6 $\sigma$ )	$f_{2000}^{143}$	29.2	$29^{+5}_{-5}$ (-0.5 $\sigma$ )
$A^{\text{kSZ}}$	4.6	—	$D_{40}$	1225.4	$1226^{+23}_{-23}$ (-0.8 $\sigma$ )	$f_{2000}^{217}$	106.66	$106.5^{+3.7}_{-3.7}$ (-0.1 $\sigma$ )
$A_{100}^{\text{dust}}$	0.975	$0.99^{+0.38}_{-0.37}$	$D_{220}$	5714	$5710^{+76}_{-75}$ (-0.5 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.79	$32^{+4}_{-4}$ (-0.7 $\sigma$ )
$A_{143}^{\text{dust}}$	1.031	$1.03^{+0.36}_{-0.36}$	$D_{810}$	2530.8	$2530^{+27}_{-26}$ (-0.4 $\sigma$ )	$\chi_{\text{lensing}}^2$	9.29	9.5 ( $\nu$ : 0.8) (-0.2 $\sigma$ )
$A_{217}^{\text{dust}}$	1.206	$1.21^{+0.23}_{-0.23}$	$D_{1420}$	815.0	$815.0^{+9.5}_{-9.4}$ (+0.0 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10494.85	10495.9 ( $\nu$ : 1.4) (-0.5 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.976	$0.99^{+0.35}_{-0.35}$	$n_{s,0.002}$	0.9679	$0.9674^{+0.0098}_{-0.0096}$ (+0.7 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	12937.8	12954.3 ( $\nu$ : 18.3)
$c_{100}$	0.99667	$0.9968^{+0.0019}_{-0.0019}$ (-1.8 $\sigma$ )	$Y_{\text{P}}$	0.244961	$0.24495^{+0.00015}_{-0.00014}$ (-4.6 $\sigma$ )	$\chi_{\text{prior}}^2$	3.7	9.1 ( $\nu$ : 6.3) (-1.9 $\sigma$ )
$c_{217}$	0.99719	$0.9971^{+0.0035}_{-0.0035}$ (+0.7 $\sigma$ )	Age/Gyr	13.809	$13.88^{+0.20}_{-0.16}$ (-0.3 $\sigma$ )	$\chi_{\text{CMB}}^2$	23441.9	23459.7 ( $\nu$ : 18.9) (+1555.9 $\sigma$ )
$c_{TE}$	1.0051	$1.0054^{+0.0086}_{-0.0086}$	$z_*$	1089.83	$1089.93^{+0.68}_{-0.63}$ (-0.7 $\sigma$ )			
$c_{EE}$	1.0014	$1.0012^{+0.0082}_{-0.0081}$	$r_*$	144.76	$144.66^{+0.66}_{-0.65}$ (+0.3 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 23445.66$ ;  $\Delta\chi_{\text{eff}}^2 = 10498.31$ ;  $\bar{\chi}_{\text{eff}}^2 = 23468.73$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 10488.50$ ;  $R - 1 = 0.00697$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.29 ( $\Delta$  -0.41) lowl.SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10494.85 ( $\Delta$  -0.63) CamSpec like\_v9.10CMH\_unified: 12937.77



### 7.39 base\_mnu\_plikHM\_TT\_lowTEB\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022278	$0.02228^{+0.00040}_{-0.00040}$	$\Omega_\nu h^2$	0.00001	$< 0.00230$	$k_D$	0.14055	$0.14035^{+0.00093}_{-0.00095}$
$\Omega_c h^2$	0.11953	$0.1188^{+0.0028}_{-0.0029}$	$\Omega_m h^3$	0.09637	$0.0959^{+0.0012}_{-0.0013}$	$100\theta_D$	0.16090	$0.16093^{+0.00053}_{-0.00051}$
$100\theta_{MC}$	1.04093	$1.04099^{+0.00084}_{-0.00083}$	$\sigma_8$	0.8427	$0.825^{+0.040}_{-0.042}$	$z_{eq}$	3389	$3371^{+65}_{-68}$
$\tau$	0.0784	$0.082^{+0.037}_{-0.037}$	$\sigma_8 \Omega_m^{0.5}$	0.4670	$0.460^{+0.022}_{-0.023}$	$k_{eq}$	0.010343	$0.01029^{+0.00020}_{-0.00021}$
$\Sigma m_\nu$ [eV]	0.001	$< 0.214$	$\sigma_8 \Omega_m^{0.25}$	0.6274	$0.616^{+0.027}_{-0.031}$	$100\theta_{eq}$	0.8154	$0.819^{+0.013}_{-0.012}$
$\ln(10^{10} A_s)$	3.090	$3.096^{+0.072}_{-0.072}$	$\sigma_8/h^{0.5}$	1.0223	$1.004^{+0.043}_{-0.049}$	$100\theta_{s,eq}$	0.4505	$0.4523^{+0.0067}_{-0.0062}$
$n_s$	0.9666	$0.9678^{+0.0095}_{-0.0093}$	$\langle d^2 \rangle^{1/2}$	2.504	$2.488^{+0.088}_{-0.088}$	$r_{drag}/D_V(0.57)$	0.07181	$0.07163^{+0.00090}_{-0.00087}$
$y_{cal}$	1.00031	$1.0004^{+0.0048}_{-0.0049}$	$z_{re}$	9.99	$10.3^{+3.4}_{-3.4}$	$H(0.57)$	93.22	$92.96^{+0.65}_{-0.73}$
$A_{217}^{CIB}$	65.9	$64^{+10}_{-10}$	$10^9 A_s$	2.199	$2.21^{+0.16}_{-0.15}$	$D_A(0.57)$	1382.5	$1388^{+19}_{-17}$
$\xi^{tSZ \times CIB}$	0.16	—	$10^9 A_s e^{-2\tau}$	1.8799	$1.876^{+0.024}_{-0.024}$	$F_{AP}(0.57)$	0.67492	$0.6759^{+0.0041}_{-0.0040}$
$A_{143}^{tSZ}$	7.04	$5.2^{+3.7}_{-3.8}$	$D_{40}$	1235.0	$1234^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4877	$0.480^{+0.020}_{-0.022}$
$A_{100}^{PS}$	251	$258^{+60}_{-50}$	$D_{220}$	5718	$5721^{+78}_{-78}$	$\sigma_8(0.57)$	0.6275	$0.614^{+0.030}_{-0.032}$
$A_{143}^{PS}$	40.8	$43^{+20}_{-20}$	$D_{810}$	2534.4	$2533^{+26}_{-27}$	$f_{2000}^{143}$	29.1	$30^{+6}_{-6}$
$A_{143 \times 217}^{PS}$	37.0	$39^{+20}_{-20}$	$D_{1420}$	815.0	$815.0^{+9.6}_{-10}$	$f_{2000}^{143 \times 217}$	31.96	$32^{+4}_{-4}$
$A_{217}^{PS}$	99.0	$97^{+20}_{-20}$	$D_{2000}$	230.73	$230.6^{+3.5}_{-3.6}$	$f_{2000}^{217}$	105.53	$105.8^{+3.9}_{-3.9}$
$A^{kSZ}$	0.00	$< 8.25$	$n_{s,0.002}$	0.9666	$0.9678^{+0.0095}_{-0.0093}$	$\chi_{lowTEB}^2$	10496.49	$10497.3 (\nu: 3.2)$
$A_{100}^{dustTT}$	7.42	$7.4^{+3.7}_{-3.7}$	$Y_P$	0.245353	$0.24535^{+0.00018}_{-0.00019}$	$\chi_{plik}^2$	763.1	$777.5 (\nu: 16.9)$
$A_{143}^{dustTT}$	9.03	$9.0^{+3.6}_{-3.6}$	$Y_P^{BBN}$	0.246679	$0.24668^{+0.00018}_{-0.00019}$	$\chi_{6DF}^2$	0.006	$0.073 (\nu: 0.0)$
$A_{143 \times 217}^{dustTT}$	17.8	$17.1^{+8.3}_{-8.2}$	$10^5 D/H$	2.609	$2.608^{+0.078}_{-0.075}$	$\chi_{MGS}^2$	1.47	$1.31 (\nu: 0.2)$
$A_{217}^{dustTT}$	82.1	$82^{+10}_{-10}$	Age/Gyr	13.776	$13.808^{+0.083}_{-0.077}$	$\chi_{DR11CMass}^2$	2.41	$2.97 (\nu: 0.3)$
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1089.99	$1089.92^{+0.63}_{-0.62}$	$\chi_{DR11LOWZ}^2$	0.43	$0.81 (\nu: 0.2)$
$c_{217}$	0.99591	$0.9959^{+0.0028}_{-0.0028}$	$r_*$	144.63	$144.82^{+0.73}_{-0.70}$	$\chi_{prior}^2$	1.9	$7.3 (\nu: 6.3)$
$H_0$	67.95	$67.6^{+1.3}_{-1.3}$	$100\theta_*$	1.04108	$1.04119^{+0.00084}_{-0.00083}$	$\chi_{CMB}^2$	11259.6	$11274.8 (\nu: 15.6)$
$\Omega_\Lambda$	0.6929	$0.689^{+0.016}_{-0.016}$	$D_A/\text{Gpc}$	13.892	$13.909^{+0.070}_{-0.067}$	$\chi_{BAO}^2$	4.32	$5.2 (\nu: 0.7)$
$\Omega_m$	0.3071	$0.311^{+0.016}_{-0.016}$	$z_{drag}$	1059.70	$1059.64^{+0.90}_{-0.89}$			
$\Omega_m h^2$	0.14182	$0.1420^{+0.0025}_{-0.0024}$	$r_{drag}$	147.32	$147.52^{+0.77}_{-0.74}$			

Best-fit  $\chi_{eff}^2 = 11265.84$ ;  $\bar{\chi}_{eff}^2 = 11287.27$ ;  $R - 1 = 0.00894$

$\chi_{eff}^2$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMass: 2.42 DR11LOWZ: 0.43 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c-AP: 10496.49 plik\_dx11dr2\_HM\_v18.TT: 763.12

## 7.40 base\_mnu\_plikHM\_TT\_lowTEB\_BAO\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022300	$0.02230^{+0.00040}_{-0.00040}$	$\Omega_\nu h^2$	0.00003	$< 0.00218$	$k_D$	0.14055	$0.14035^{+0.00091}_{-0.00094}$
$\Omega_c h^2$	0.11940	$0.1186^{+0.0027}_{-0.0029}$	$\Omega_m h^3$	0.09641	$0.0960^{+0.0012}_{-0.0013}$	$100\theta_D$	0.16088	$0.16092^{+0.00053}_{-0.00051}$
$100\theta_{MC}$	1.04097	$1.04101^{+0.00083}_{-0.00083}$	$\sigma_8$	0.8428	$0.826^{+0.039}_{-0.041}$	$z_{eq}$	3386	$3368^{+64}_{-67}$
$\tau$	0.0792	$0.083^{+0.037}_{-0.037}$	$\sigma_8 \Omega_m^{0.5}$	0.4664	$0.460^{+0.022}_{-0.023}$	$k_{eq}$	0.010335	$0.01028^{+0.00019}_{-0.00020}$
$\Sigma m_\nu$ [eV]	0.003	$< 0.203$	$\sigma_8 \Omega_m^{0.25}$	0.6270	$0.616^{+0.027}_{-0.030}$	$100\theta_{eq}$	0.8159	$0.819^{+0.013}_{-0.012}$
$\ln(10^{10} A_s)$	3.092	$3.097^{+0.071}_{-0.072}$	$\sigma_8/h^{0.5}$	1.0219	$1.005^{+0.043}_{-0.048}$	$100\theta_{s,eq}$	0.4508	$0.4526^{+0.0066}_{-0.0061}$
$n_s$	0.9670	$0.9681^{+0.0093}_{-0.0093}$	$\langle d^2 \rangle^{1/2}$	2.503	$2.488^{+0.089}_{-0.088}$	$r_{drag}/D_V(0.57)$	0.07186	$0.07171^{+0.00088}_{-0.00086}$
$y_{cal}$	1.00029	$1.0004^{+0.0047}_{-0.0048}$	$z_{re}$	10.06	$10.3^{+3.3}_{-3.4}$	$H(0.57)$	93.26	$93.02^{+0.63}_{-0.70}$
$A_{217}^{CIB}$	65.7	$64^{+10}_{-10}$	$10^9 A_s$	2.202	$2.21^{+0.16}_{-0.15}$	$D_A(0.57)$	1381.5	$1387^{+18}_{-17}$
$\xi^{tSZ \times CIB}$	0.12	—	$10^9 A_s e^{-2\tau}$	1.8794	$1.876^{+0.024}_{-0.024}$	$F_{AP}(0.57)$	0.67470	$0.6755^{+0.0040}_{-0.0039}$
$A_{143}^{tSZ}$	7.11	$5.2^{+3.7}_{-3.9}$	$D_{40}$	1234.6	$1234^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4876	$0.480^{+0.020}_{-0.022}$
$A_{100}^{PS}$	251	$257^{+60}_{-60}$	$D_{220}$	5719	$5722^{+79}_{-79}$	$\sigma_8(0.57)$	0.6278	$0.615^{+0.029}_{-0.031}$
$A_{143}^{PS}$	39.6	$43^{+20}_{-20}$	$D_{810}$	2534.4	$2533^{+27}_{-27}$	$f_{2000}^{143}$	29.0	$30^{+6}_{-6}$
$A_{143 \times 217}^{PS}$	35.5	$39^{+20}_{-20}$	$D_{1420}$	815.2	$815.1^{+9.8}_{-9.8}$	$f_{2000}^{143 \times 217}$	31.78	$32^{+4}_{-4}$
$A_{217}^{PS}$	99.0	$97^{+20}_{-20}$	$D_{2000}$	230.84	$230.6^{+3.5}_{-3.5}$	$f_{2000}^{217}$	105.47	$105.8^{+4.0}_{-3.9}$
$A^{kSZ}$	0.00	$< 8.19$	$n_{s,0.002}$	0.9670	$0.9681^{+0.0093}_{-0.0093}$	$\chi^2_{lowTEB}$	10496.51	$10497.3 (\nu: 3.2)$
$A_{100}^{dustTT}$	7.37	$7.4^{+3.7}_{-3.6}$	$Y_P$	0.245362	$0.24536^{+0.00018}_{-0.00019}$	$\chi^2_{plik}$	763.1	$777.4 (\nu: 16.8)$
$A_{143}^{dustTT}$	9.02	$9.1^{+3.6}_{-3.6}$	$Y_P^{BBN}$	0.246689	$0.24669^{+0.00018}_{-0.00019}$	$\chi^2_{H070p6}$	0.60	$0.81 (\nu: 0.1)$
$A_{143 \times 217}^{dustTT}$	17.7	$17.1^{+8.2}_{-8.3}$	$10^5 D/H$	2.604	$2.605^{+0.077}_{-0.074}$	$\chi^2_{6DF}$	0.003	$0.061 (\nu: 0.0)$
$A_{217}^{dustTT}$	82.1	$82^{+10}_{-10}$	Age/Gyr	13.772	$13.802^{+0.080}_{-0.075}$	$\chi^2_{MGS}$	1.54	$1.41 (\nu: 0.2)$
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1089.95	$1089.89^{+0.63}_{-0.62}$	$\chi^2_{DR11CMass}$	2.42	$2.92 (\nu: 0.3)$
$c_{217}$	0.99584	$0.9959^{+0.0028}_{-0.0029}$	$r_*$	144.65	$144.84^{+0.72}_{-0.69}$	$\chi^2_{DR11LOWZ}$	0.37	$0.71 (\nu: 0.2)$
$H_0$	68.02	$67.7^{+1.2}_{-1.2}$	$100\theta_*$	1.04112	$1.04121^{+0.00084}_{-0.00082}$	$\chi^2_{prior}$	1.9	$7.3 (\nu: 6.3)$
$\Omega_\Lambda$	0.6937	$0.690^{+0.015}_{-0.016}$	$D_A/\text{Gpc}$	13.893	$13.910^{+0.069}_{-0.067}$	$\chi^2_{CMB}$	11259.6	$11274.8 (\nu: 15.4)$
$\Omega_m$	0.3063	$0.310^{+0.016}_{-0.015}$	$z_{drag}$	1059.74	$1059.67^{+0.91}_{-0.91}$	$\chi^2_{BAO}$	4.34	$5.1 (\nu: 0.6)$
$\Omega_m h^2$	0.14173	$0.1418^{+0.0024}_{-0.0024}$	$r_{drag}$	147.33	$147.53^{+0.77}_{-0.74}$			

Best-fit  $\chi^2_{eff} = 11266.47$ ;  $\bar{\chi}^2_{eff} = 11287.94$ ;  $R - 1 = 0.00873$

$\chi^2_{eff}$ : BAO - 6DF: 0.00 MGS: 1.54 DR11CMass: 2.42 DR11LOWZ: 0.37 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.51 plik\_dx11dr2\_HM\_v18\_TT: 763.08  
Hubble - H070p6: 0.60

# 7.41 base\_mnu\_plikHM\_TT\_lowTEB\_BAO\_post\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022278	$0.02231^{+0.00040}_{-0.00040}$	$\Omega_\nu h^2$	0.00001	$< 0.00212$	$k_D$	0.14046	$0.14034^{+0.00091}_{-0.00094}$
$\Omega_c h^2$	0.11924	$0.1186^{+0.0027}_{-0.0028}$	$\Omega_m h^3$	0.09633	$0.0960^{+0.0012}_{-0.0012}$	$100\theta_D$	0.16092	$0.16091^{+0.00053}_{-0.00051}$
$100\theta_{MC}$	1.04097	$1.04102^{+0.00083}_{-0.00083}$	$\sigma_8$	0.8415	$0.827^{+0.039}_{-0.041}$	$z_{eq}$	3382	$3366^{+63}_{-66}$
$\tau$	0.0783	$0.083^{+0.037}_{-0.036}$	$\sigma_8 \Omega_m^{0.5}$	0.4651	$0.460^{+0.021}_{-0.023}$	$k_{eq}$	0.010321	$0.01027^{+0.00019}_{-0.00020}$
$\Sigma m_\nu$ [eV]	0.001	$< 0.197$	$\sigma_8 \Omega_m^{0.25}$	0.6256	$0.616^{+0.027}_{-0.030}$	$100\theta_{eq}$	0.8167	$0.820^{+0.013}_{-0.012}$
$\ln(10^{10} A_s)$	3.089	$3.097^{+0.071}_{-0.071}$	$\sigma_8/h^{0.5}$	1.0199	$1.005^{+0.043}_{-0.047}$	$100\theta_{s,eq}$	0.4512	$0.4528^{+0.0065}_{-0.0060}$
$n_s$	0.9670	$0.9684^{+0.0093}_{-0.0092}$	$\langle d^2 \rangle^{1/2}$	2.499	$2.487^{+0.088}_{-0.088}$	$r_{drag}/D_V(0.57)$	0.07191	$0.07175^{+0.00086}_{-0.00084}$
$y_{cal}$	1.00032	$1.0004^{+0.0047}_{-0.0048}$	$z_{re}$	9.98	$10.3^{+3.3}_{-3.3}$	$H(0.57)$	93.26	$93.05^{+0.63}_{-0.69}$
$A_{217}^{CIB}$	66.8	$64^{+10}_{-10}$	$10^9 A_s$	2.197	$2.22^{+0.16}_{-0.15}$	$D_A(0.57)$	1381.0	$1386^{+17}_{-16}$
$\xi^{tSZ \times CIB}$	0.03	—	$10^9 A_s e^{-2\tau}$	1.8782	$1.875^{+0.024}_{-0.024}$	$F_{AP}(0.57)$	0.67449	$0.6753^{+0.0039}_{-0.0038}$
$A_{143}^{tSZ}$	7.17	$5.2^{+3.7}_{-3.9}$	$D_{40}$	1233.8	$1233^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4865	$0.480^{+0.020}_{-0.021}$
$A_{100}^{PS}$	252	$257^{+60}_{-60}$	$D_{220}$	5718	$5723^{+78}_{-79}$	$\sigma_8(0.57)$	0.6270	$0.616^{+0.029}_{-0.031}$
$A_{143}^{PS}$	38.6	$43^{+20}_{-20}$	$D_{810}$	2533.5	$2533^{+27}_{-27}$	$f_{2000}^{143}$	29.4	$30^{+6}_{-6}$
$A_{143 \times 217}^{PS}$	33	$39^{+20}_{-20}$	$D_{1420}$	814.7	$815.1^{+9.8}_{-9.8}$	$f_{2000}^{143 \times 217}$	32.06	$32^{+4}_{-4}$
$A_{217}^{PS}$	97.4	$97^{+20}_{-20}$	$D_{2000}$	230.60	$230.7^{+3.5}_{-3.5}$	$f_{2000}^{217}$	105.75	$105.7^{+3.9}_{-3.9}$
$A^{kSZ}$	0.00	$< 8.19$	$n_{s,0.002}$	0.9670	$0.9684^{+0.0093}_{-0.0092}$	$\chi^2_{lowTEB}$	10496.36	$10497.3 (\nu: 3.3)$
$A_{100}^{dustTT}$	7.44	$7.4^{+3.7}_{-3.7}$	$Y_P$	0.245352	$0.24536^{+0.00018}_{-0.00019}$	$\chi^2_{plik}$	763.1	$777.4 (\nu: 16.8)$
$A_{143}^{dustTT}$	9.01	$9.1^{+3.6}_{-3.6}$	$Y_P^{BBN}$	0.246678	$0.24669^{+0.00018}_{-0.00019}$	$\chi^2_{H070p6}$	0.58	$0.77 (\nu: 0.1)$
$A_{143 \times 217}^{dustTT}$	17.6	$17.1^{+8.2}_{-8.3}$	$10^5 D/H$	2.609	$2.604^{+0.077}_{-0.074}$	$\chi^2_{JLA}$	706.602	$706.73 (\nu: 0.0)$
$A_{217}^{dustTT}$	82.1	$82^{+10}_{-10}$	Age/Gyr	13.774	$13.800^{+0.078}_{-0.073}$	$\chi^2_{6DF}$	0.001	$0.054 (\nu: 0.0)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1089.96	$1089.87^{+0.63}_{-0.61}$	$\chi^2_{MGS}$	1.61	$1.46 (\nu: 0.2)$
$c_{217}$	0.99596	$0.9959^{+0.0028}_{-0.0029}$	$r_*$	144.71	$144.86^{+0.71}_{-0.68}$	$\chi^2_{DR11CMAS}$	2.44	$2.88 (\nu: 0.2)$
$H_0$	68.07	$67.7^{+1.2}_{-1.2}$	$100\theta_*$	1.04113	$1.04122^{+0.00083}_{-0.00083}$	$\chi^2_{DR11LOWZ}$	0.32	$0.64 (\nu: 0.2)$
$\Omega_\Lambda$	0.6946	$0.691^{+0.015}_{-0.016}$	$D_A/\text{Gpc}$	13.899	$13.912^{+0.068}_{-0.066}$	$\chi^2_{prior}$	2.1	$7.3 (\nu: 6.3)$
$\Omega_m$	0.3054	$0.309^{+0.016}_{-0.015}$	$z_{drag}$	1059.67	$1059.68^{+0.90}_{-0.89}$	$\chi^2_{CMB}$	11259.5	$11274.7 (\nu: 15.4)$
$\Omega_m h^2$	0.14152	$0.1417^{+0.0024}_{-0.0024}$	$r_{drag}$	147.40	$147.55^{+0.76}_{-0.73}$	$\chi^2_{BAO}$	4.37	$5.0 (\nu: 0.5)$

Best-fit  $\chi^2_{eff} = 11973.10$ ;  $\bar{\chi}^2_{eff} = 11994.57$ ;  $R - 1 = 0.00922$

$\chi^2_{eff}$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMAS: 2.44 DR11LOWZ: 0.32 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.36 plik\_dx11dr2\_HM\_v18\_TT: 763.11  
Hubble - H070p6: 0.58 SN - JLA December\_2013: 706.60

## 7.42 base\_mnu\_plikHM\_TTTEEE\_lowTEB\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022295	$0.02229^{+0.00027}_{-0.00027}$	$A_{143 \times 217}^{\text{dustTE}}$	0.337	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04101	$1.04103^{+0.00057}_{-0.00058}$
$\Omega_c h^2$	0.11950	$0.1193^{+0.0021}_{-0.0022}$	$A_{217}^{\text{dustTE}}$	1.68	$1.66^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	13.8927	$13.898^{+0.048}_{-0.047}$
$100\theta_{\text{MC}}$	1.04085	$1.04083^{+0.00057}_{-0.00059}$	$c_{100}$	0.99821	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.70	$1059.70^{+0.58}_{-0.57}$
$\tau$	0.0806	$0.082^{+0.033}_{-0.033}$	$c_{217}$	0.99590	$0.9959^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.32	$147.38^{+0.51}_{-0.51}$
$\Sigma m_\nu [\text{eV}]$	0.000	$< 0.168$	$H_0$	67.95	$67.5^{+1.0}_{-1.1}$	$k_D$	0.14057	$0.14050^{+0.00059}_{-0.00059}$
$\ln(10^{10} A_s)$	3.096	$3.098^{+0.064}_{-0.064}$	$\Omega_\Lambda$	0.6929	$0.688^{+0.013}_{-0.015}$	$100\theta_D$	0.160868	$0.16088^{+0.00035}_{-0.00034}$
$n_s$	0.9663	$0.9660^{+0.0085}_{-0.0082}$	$\Omega_m$	0.3071	$0.312^{+0.015}_{-0.013}$	$z_{\text{eq}}$	3388.5	$3383^{+48}_{-49}$
$y_{\text{cal}}$	1.00024	$1.0005^{+0.0050}_{-0.0049}$	$\Omega_m h^2$	0.14180	$0.1423^{+0.0020}_{-0.0020}$	$k_{\text{eq}}$	0.010342	$0.01032^{+0.00015}_{-0.00015}$
$A_{217}^{\text{CIB}}$	64.0	$64^{+10}_{-10}$	$\Omega_\nu h^2$	0.00000	$< 0.00181$	$100\theta_{\text{eq}}$	0.8154	$0.8165^{+0.0094}_{-0.0090}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.41	—	$\Omega_m h^3$	0.09636	$0.09606^{+0.00082}_{-0.00086}$	$100\theta_{s,\text{eq}}$	0.45055	$0.4511^{+0.0049}_{-0.0046}$
$A_{143}^{\text{tSZ}}$	6.94	$5.4^{+3.6}_{-3.8}$	$\sigma_8$	0.8446	$0.832^{+0.032}_{-0.034}$	$r_{\text{drag}}/D_V(0.57)$	0.07180	$0.07156^{+0.00075}_{-0.00078}$
$A_{100}^{\text{PS}}$	251	$259^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4681	$0.464^{+0.018}_{-0.018}$	$H(0.57)$	93.22	$92.97^{+0.56}_{-0.59}$
$A_{143}^{\text{PS}}$	44.0	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6288	$0.621^{+0.022}_{-0.024}$	$D_A(0.57)$	1382.5	$1389^{+16}_{-15}$
$A_{143 \times 217}^{\text{PS}}$	44.3	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0246	$1.012^{+0.036}_{-0.039}$	$F_{\text{AP}}(0.57)$	0.67492	$0.6762^{+0.0037}_{-0.0034}$
$A_{217}^{\text{PS}}$	102.3	$98^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.511	$2.502^{+0.076}_{-0.076}$	$f\sigma_8(0.57)$	0.4888	$0.484^{+0.017}_{-0.018}$
$A^{\text{kSZ}}$	0.00	$< 7.79$	$z_{\text{re}}$	10.19	$10.3^{+3.0}_{-3.0}$	$\sigma_8(0.57)$	0.6290	$0.619^{+0.025}_{-0.026}$
$A_{100}^{\text{dustTT}}$	7.43	$7.4^{+3.7}_{-3.7}$	$10^9 A_s$	2.210	$2.22^{+0.14}_{-0.14}$	$f_{2000}^{143}$	28.4	$29^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	9.02	$8.9^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8814	$1.880^{+0.022}_{-0.022}$	$f_{2000}^{143 \times 217}$	31.69	$32^{+4}_{-4}$
$A_{143 \times 217}^{\text{dustTT}}$	18.0	$17.0^{+8.2}_{-8.3}$	$D_{40}$	1237.8	$1240^{+25}_{-25}$	$f_{2000}^{217}$	105.19	$105.7^{+3.7}_{-3.7}$
$A_{217}^{\text{dustTT}}$	82.5	$82^{+10}_{-10}$	$D_{220}$	5726	$5732^{+76}_{-76}$	$\chi_{\text{lowTEB}}^2$	10496.94	$10497.7 (\nu: 2.6)$
$A_{100}^{\text{dustEE}}$	0.0812	$0.081^{+0.011}_{-0.011}$	$D_{810}$	2536.1	$2536^{+26}_{-26}$	$\chi_{\text{plik}}^2$	2431.4	$2450.2 (\nu: 23.0)$
$A_{100 \times 143}^{\text{dustEE}}$	0.0488	$0.0490^{+0.0097}_{-0.0097}$	$D_{1420}$	815.5	$815.1^{+9.1}_{-9.3}$	$\chi_{6\text{DF}}^2$	0.006	$0.073 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.0997^{+0.064}_{-0.064}$	$D_{2000}$	230.91	$230.6^{+3.1}_{-3.2}$	$\chi_{\text{MGS}}^2$	1.47	$1.21 (\nu: 0.1)$
$A_{143}^{\text{dustEE}}$	0.1002	$0.100^{+0.013}_{-0.013}$	$n_{s,0.002}$	0.9663	$0.9660^{+0.0085}_{-0.0082}$	$\chi_{\text{DR11CMass}}^2$	2.42	$2.93 (\nu: 0.3)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.224^{+0.090}_{-0.092}$	$Y_P$	0.245360	$0.24536^{+0.00012}_{-0.00013}$	$\chi_{\text{DR11LOWZ}}^2$	0.43	$0.88 (\nu: 0.2)$
$A_{217}^{\text{dustEE}}$	0.647	$0.65^{+0.26}_{-0.25}$	$Y_P^{\text{BBN}}$	0.246686	$0.24668^{+0.00012}_{-0.00013}$	$\chi_{\text{prior}}^2$	6.7	$19.3 (\nu: 15.1)$
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.074}_{-0.073}$	$10^5 D/H$	2.606	$2.606^{+0.052}_{-0.051}$	$\chi_{\text{CMB}}^2$	12928.4	$12948.0 (\nu: 22.2)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.132^{+0.057}_{-0.057}$	$\text{Age/Gyr}$	13.777	$13.804^{+0.064}_{-0.059}$	$\chi_{\text{BAO}}^2$	4.33	$5.1 (\nu: 0.6)$
$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.17}_{-0.17}$	$z_*$	1089.968	$1089.95^{+0.47}_{-0.46}$			
$A_{143}^{\text{dustTE}}$	0.155	$0.16^{+0.11}_{-0.10}$	$r_*$	144.62	$144.68^{+0.50}_{-0.49}$			

Best-fit  $\chi_{\text{eff}}^2 = 12939.33$ ;  $\bar{\chi}_{\text{eff}}^2 = 12972.41$ ;  $R - 1 = 0.01159$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMass: 2.42 DR11LOWZ: 0.43 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.94 plik\_dx11dr2\_HM\_v18\_TTTEEE:

### 7.43 base\_mnu\_plikHM\_TTTEEE\_lowTEB\_BAO\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022295	$0.02230^{+0.00027}_{-0.00027}$	$A_{143 \times 217}^{\text{dust}TE}$	0.336	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04099	$1.04104^{+0.00056}_{-0.00058}$
$\Omega_c h^2$	0.11947	$0.1192^{+0.0021}_{-0.0021}$	$A_{217}^{\text{dust}TE}$	1.67	$1.67^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	13.8937	$13.900^{+0.047}_{-0.046}$
$100\theta_{\text{MC}}$	1.04083	$1.04084^{+0.00057}_{-0.00059}$	$c_{100}$	0.99819	$0.9982^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.70	$1059.72^{+0.58}_{-0.57}$
$\tau$	0.0806	$0.082^{+0.033}_{-0.033}$	$c_{217}$	0.99590	$0.9959^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.32	$147.39^{+0.50}_{-0.50}$
$\Sigma m_\nu [\text{eV}]$	0.003	$< 0.159$	$H_0$	67.95	$67.6^{+1.0}_{-1.1}$	$k_D$	0.14056	$0.14050^{+0.00059}_{-0.00058}$
$\ln(10^{10} A_s)$	3.095	$3.098^{+0.063}_{-0.065}$	$\Omega_\Lambda$	0.6929	$0.689^{+0.013}_{-0.014}$	$100\theta_D$	0.160866	$0.16087^{+0.00035}_{-0.00034}$
$n_s$	0.9662	$0.9662^{+0.0084}_{-0.0082}$	$\Omega_m$	0.3071	$0.311^{+0.014}_{-0.013}$	$z_{\text{eq}}$	3387.8	$3381^{+48}_{-49}$
$y_{\text{cal}}$	1.00014	$1.0005^{+0.0049}_{-0.0049}$	$\Omega_m h^2$	0.14180	$0.1421^{+0.0020}_{-0.0020}$	$k_{\text{eq}}$	0.010340	$0.01032^{+0.00015}_{-0.00015}$
$A_{217}^{\text{CIB}}$	64.9	$64^{+10}_{-10}$	$\Omega_\nu h^2$	0.00003	$< 0.00171$	$100\theta_{\text{eq}}$	0.8156	$0.8169^{+0.0093}_{-0.0090}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.24	—	$\Omega_m h^3$	0.09635	$0.09609^{+0.00080}_{-0.00083}$	$100\theta_{\text{s,eq}}$	0.45061	$0.4513^{+0.0047}_{-0.0046}$
$A_{143}^{\text{tSZ}}$	7.16	$5.4^{+3.6}_{-3.8}$	$\sigma_8$	0.8440	$0.832^{+0.030}_{-0.034}$	$r_{\text{drag}}/D_V(0.57)$	0.07180	$0.07161^{+0.00074}_{-0.00076}$
$A_{100}^{\text{PS}}$	252	$259^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4677	$0.464^{+0.018}_{-0.018}$	$H(0.57)$	93.21	$93.02^{+0.54}_{-0.57}$
$A_{143}^{\text{PS}}$	41.0	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6283	$0.622^{+0.022}_{-0.023}$	$D_A(0.57)$	1382.6	$1388^{+16}_{-14}$
$A_{143 \times 217}^{\text{PS}}$	39.1	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0239	$1.012^{+0.035}_{-0.038}$	$F_{\text{AP}}(0.57)$	0.67491	$0.6759^{+0.0036}_{-0.0034}$
$A_{217}^{\text{PS}}$	100.3	$98^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.510	$2.502^{+0.076}_{-0.075}$	$f\sigma_8(0.57)$	0.4885	$0.484^{+0.017}_{-0.017}$
$A^{\text{kSZ}}$	0.00	$< 7.72$	$z_{\text{re}}$	10.19	$10.3^{+3.0}_{-3.1}$	$\sigma_8(0.57)$	0.6285	$0.619^{+0.025}_{-0.026}$
$A_{100}^{\text{dust}TT}$	7.30	$7.4^{+3.8}_{-3.7}$	$10^9 A_s$	2.209	$2.22^{+0.14}_{-0.14}$	$f_{2000}^{143}$	28.6	$29^{+5}_{-5}$
$A_{143}^{\text{dust}TT}$	8.98	$8.9^{+3.6}_{-3.5}$	$10^9 A_s e^{-2\tau}$	1.8802	$1.880^{+0.022}_{-0.022}$	$f_{2000}^{143 \times 217}$	31.71	$32^{+4}_{-4}$
$A_{143 \times 217}^{\text{dust}TT}$	17.8	$17.0^{+8.1}_{-8.3}$	$D_{40}$	1237.5	$1240^{+25}_{-25}$	$f_{2000}^{217}$	105.31	$105.6^{+3.7}_{-3.7}$
$A_{217}^{\text{dust}TT}$	82.3	$82^{+10}_{-10}$	$D_{220}$	5724	$5732^{+75}_{-76}$	$\chi_{\text{lowTEB}}^2$	10496.94	$10497.7 (\nu: 2.7)$
$A_{100}^{\text{dust}EE}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{810}$	2534.5	$2535^{+26}_{-26}$	$\chi_{\text{plik}}^2$	2431.3	$2450.2 (\nu: 22.9)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0491	$0.0490^{+0.010}_{-0.0097}$	$D_{1420}$	814.9	$815.2^{+9.1}_{-9.5}$	$\chi_{\text{H070p6}}^2$	0.64	$0.83 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.0995^{+0.063}_{-0.064}$	$D_{2000}$	230.73	$230.7^{+3.1}_{-3.1}$	$\chi_{6\text{DF}}^2$	0.006	$0.062 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1003	$0.100^{+0.013}_{-0.013}$	$n_{\text{s},0.002}$	0.9662	$0.9662^{+0.0084}_{-0.0082}$	$\chi_{\text{MGS}}^2$	1.47	$1.28 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.224^{+0.090}_{-0.092}$	$Y_{\text{P}}$	0.245360	$0.24536^{+0.00012}_{-0.00013}$	$\chi_{\text{DR11CMass}}^2$	2.42	$2.85 (\nu: 0.2)$
$A_{217}^{\text{dust}EE}$	0.652	$0.65^{+0.26}_{-0.24}$	$Y_{\text{P}}^{\text{BBN}}$	0.246686	$0.24669^{+0.00012}_{-0.00013}$	$\chi_{\text{DR11LOWZ}}^2$	0.43	$0.79 (\nu: 0.2)$
$A_{100}^{\text{dust}TE}$	0.140	$0.141^{+0.075}_{-0.073}$	$10^5 \text{D}/\text{H}$	2.606	$2.604^{+0.052}_{-0.051}$	$\chi_{\text{prior}}^2$	6.8	$19.3 (\nu: 14.6)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.057}_{-0.057}$	$\text{Age}/\text{Gyr}$	13.777	$13.800^{+0.061}_{-0.057}$	$\chi_{\text{CMB}}^2$	12928.2	$12947.9 (\nu: 22.1)$
$A_{100 \times 217}^{\text{dust}TE}$	0.301	$0.30^{+0.17}_{-0.17}$	$z_*$	1089.965	$1089.93^{+0.46}_{-0.45}$	$\chi_{\text{BAO}}^2$	4.32	$4.99 (\nu: 0.4)$
$A_{143}^{\text{dust}TE}$	0.156	$0.16^{+0.11}_{-0.10}$	$r_*$	144.632	$144.70^{+0.50}_{-0.49}$			

Best-fit  $\chi^2_{\text{eff}} = 12939.99$ ;  $\bar{\chi}^2_{\text{eff}} = 12973.05$ ;  $R - 1 = 0.01333$   
 $\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMASS: 2.42 DR11LOWZ: 0.43 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.94 plik\_dx11dr2\_HM\_v18\_TTTEEE:  
2431.29 Hubble - H070p6: 0.64

#### 7.44 base\_mnu\_plikHM\_TTTEEE\_lowTEB\_BAO\_post\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022293	$0.02231^{+0.00027}_{-0.00027}$	$A_{143 \times 217}^{\text{dustTE}}$	0.339	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04100	$1.04104^{+0.00057}_{-0.00058}$
$\Omega_c h^2$	0.11949	$0.1191^{+0.0021}_{-0.0021}$	$A_{217}^{\text{dustTE}}$	1.67	$1.67^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	13.8933	$13.901^{+0.046}_{-0.046}$
$100\theta_{\text{MC}}$	1.04085	$1.04085^{+0.00057}_{-0.00058}$	$c_{100}$	0.99821	$0.9982^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.70	$1059.73^{+0.59}_{-0.55}$
$\tau$	0.0801	$0.082^{+0.033}_{-0.033}$	$c_{217}$	0.99589	$0.9959^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.321	$147.40^{+0.49}_{-0.49}$
$\Sigma m_\nu [\text{eV}]$	0.001	$< 0.153$	$H_0$	67.95	$67.7^{+1.0}_{-1.1}$	$k_D$	0.14056	$0.14049^{+0.00059}_{-0.00058}$
$\ln(10^{10} A_s)$	3.094	$3.098^{+0.063}_{-0.064}$	$\Omega_\Lambda$	0.6929	$0.690^{+0.013}_{-0.014}$	$100\theta_D$	0.160869	$0.16087^{+0.00035}_{-0.00034}$
$n_s$	0.9660	$0.9664^{+0.0084}_{-0.0082}$	$\Omega_m$	0.3071	$0.310^{+0.014}_{-0.013}$	$z_{\text{eq}}$	3388.1	$3379^{+47}_{-48}$
$y_{\text{cal}}$	1.00016	$1.0005^{+0.0049}_{-0.0049}$	$\Omega_m h^2$	0.14179	$0.1420^{+0.0019}_{-0.0020}$	$k_{\text{eq}}$	0.010341	$0.01031^{+0.00014}_{-0.00015}$
$A_{217}^{\text{CIB}}$	65.0	$64^{+10}_{-10}$	$\Omega_\nu h^2$	0.00001	$< 0.00165$	$100\theta_{\text{eq}}$	0.8155	$0.8172^{+0.0092}_{-0.0089}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.29	—	$\Omega_m h^3$	0.09635	$0.09610^{+0.00078}_{-0.00081}$	$100\theta_{s,\text{eq}}$	0.45058	$0.4515^{+0.0047}_{-0.0046}$
$A_{143}^{\text{tSZ}}$	7.06	$5.4^{+3.6}_{-3.8}$	$\sigma_8$	0.8438	$0.833^{+0.030}_{-0.033}$	$r_{\text{drag}}/D_V(0.57)$	0.07180	$0.07165^{+0.00072}_{-0.00074}$
$A_{100}^{\text{PS}}$	252	$259^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4676	$0.464^{+0.018}_{-0.018}$	$H(0.57)$	93.21	$93.04^{+0.49}_{-0.57}$
$A_{143}^{\text{PS}}$	42.3	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6282	$0.622^{+0.022}_{-0.023}$	$D_A(0.57)$	1382.6	$1387^{+15}_{-14}$
$A_{143 \times 217}^{\text{PS}}$	41.0	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0237	$1.012^{+0.035}_{-0.038}$	$F_{\text{AP}}(0.57)$	0.67491	$0.6757^{+0.0035}_{-0.0033}$
$A_{217}^{\text{PS}}$	100.8	$98^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.509	$2.501^{+0.076}_{-0.075}$	$f\sigma_8(0.57)$	0.4883	$0.484^{+0.016}_{-0.017}$
$A^{\text{kSZ}}$	0.01	$< 7.70$	$z_{\text{re}}$	10.14	$10.3^{+3.0}_{-3.0}$	$\sigma_8(0.57)$	0.6284	$0.620^{+0.023}_{-0.025}$
$A_{100}^{\text{dustTT}}$	7.43	$7.4^{+3.8}_{-3.7}$	$10^9 A_s$	2.207	$2.22^{+0.14}_{-0.14}$	$f_{2000}^{143}$	28.7	$29^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	8.98	$8.9^{+3.6}_{-3.5}$	$10^9 A_s e^{-2\tau}$	1.8804	$1.880^{+0.022}_{-0.022}$	$f_{2000}^{143 \times 217}$	31.85	$32^{+4}_{-4}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.0^{+8.0}_{-8.3}$	$D_{40}$	1237.7	$1239^{+25}_{-24}$	$f_{2000}^{217}$	105.37	$105.6^{+3.7}_{-3.7}$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$D_{220}$	5725	$5733^{+75}_{-76}$	$\chi_{\text{lowTEB}}^2$	10496.92	$10497.7 (\nu: 2.7)$
$A_{100}^{\text{dustEE}}$	0.0812	$0.081^{+0.011}_{-0.011}$	$D_{810}$	2534.6	$2535^{+26}_{-26}$	$\chi_{\text{plik}}^2$	2431.3	$2450.2 (\nu: 23.0)$
$A_{100 \times 143}^{\text{dustEE}}$	0.0489	$0.0491^{+0.010}_{-0.0097}$	$D_{1420}$	814.9	$815.2^{+9.1}_{-9.4}$	$\chi_{\text{H070p6}}^2$	0.64	$0.81 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.0996^{+0.063}_{-0.064}$	$D_{2000}$	230.70	$230.7^{+3.1}_{-3.1}$	$\chi_{\text{JLA}}^2$	706.636	$706.75 (\nu: 0.0)$
$A_{143}^{\text{dustEE}}$	0.1002	$0.100^{+0.013}_{-0.013}$	$n_{s,0.002}$	0.9660	$0.9664^{+0.0084}_{-0.0082}$	$\chi_{6\text{DF}}^2$	0.006	$0.055 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustEE}}$	0.222	$0.224^{+0.090}_{-0.092}$	$Y_P$	0.245359	$0.24536^{+0.00012}_{-0.00013}$	$\chi_{\text{MGS}}^2$	1.47	$1.33 (\nu: 0.1)$
$A_{217}^{\text{dustEE}}$	0.649	$0.65^{+0.26}_{-0.24}$	$Y_P^{\text{BBN}}$	0.246685	$0.24669^{+0.00012}_{-0.00013}$	$\chi_{\text{DR11CMass}}^2$	2.42	$2.81 (\nu: 0.2)$
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.075}_{-0.073}$	$10^5 D/H$	2.606	$2.603^{+0.052}_{-0.051}$	$\chi_{\text{DR11LOWZ}}^2$	0.43	$0.73 (\nu: 0.1)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.132^{+0.057}_{-0.057}$	Age/Gyr	13.777	$13.798^{+0.059}_{-0.055}$	$\chi_{\text{prior}}^2$	6.8	$19.3 (\nu: 14.6)$
$A_{100 \times 217}^{\text{dustTE}}$	0.302	$0.30^{+0.17}_{-0.17}$	$z_*$	1089.969	$1089.92^{+0.46}_{-0.44}$	$\chi_{\text{CMB}}^2$	12928.2	$12947.9 (\nu: 22.1)$
$A_{143}^{\text{dustTE}}$	0.155	$0.16^{+0.11}_{-0.10}$	$r_*$	144.630	$144.72^{+0.49}_{-0.49}$	$\chi_{\text{BAO}}^2$	4.33	$4.92 (\nu: 0.4)$

Best-fit  $\chi_{\text{eff}}^2 = 13646.61$ ;  $\bar{\chi}_{\text{eff}}^2 = 13679.70$ ;  $R - 1 = 0.01404$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMass: 2.42 DR11LOWZ: 0.43 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.92 plik\_dx11dr2\_HM\_v18\_TTTEEE:

## 7.45 base\_mnu\_CamSpecHM\_TT\_lowTEB\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022233	$0.02228^{+0.00039}_{-0.00039}$ (+0.0 $\sigma$ )	$\Omega_\Lambda$	0.6927	$0.690^{+0.016}_{-0.016}$ (+0.1 $\sigma$ )	$r_{\text{drag}}$	147.37	$147.54^{+0.76}_{-0.72}$ (+0.1 $\sigma$ )
$\Omega_c h^2$	0.11954	$0.1187^{+0.0027}_{-0.0029}$ (-0.1 $\sigma$ )	$\Omega_m$	0.3073	$0.310^{+0.016}_{-0.016}$ (-0.1 $\sigma$ )	$k_D$	0.14048	$0.14034^{+0.00090}_{-0.00091}$ (-0.0 $\sigma$ )
$100\theta_{\text{MC}}$	1.04097	$1.04101^{+0.00083}_{-0.00083}$ (+0.1 $\sigma$ )	$\Omega_m h^2$	0.14179	$0.1419^{+0.0024}_{-0.0024}$ (-0.1 $\sigma$ )	$100\theta_D$	0.16095	$0.16092^{+0.00051}_{-0.00049}$ (-0.0 $\sigma$ )
$\tau$	0.0767	$0.082^{+0.038}_{-0.036}$ (-0.0 $\sigma$ )	$\Omega_\nu h^2$	0.00001	< 0.00232 (+0.0 $\sigma$ )	$z_{\text{eq}}$	3388	$3368^{+63}_{-68}$ (-0.1 $\sigma$ )
$\Sigma m_\nu$ [eV]	0.001	< 0.216 (+0.0 $\sigma$ )	$\Omega_m h^3$	0.09631	$0.0959^{+0.0012}_{-0.0013}$ (-0.0 $\sigma$ )	$100\theta_{\text{eq}}$	0.8154	$0.819^{+0.013}_{-0.013}$ (+0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.085	$3.093^{+0.074}_{-0.070}$ (-0.1 $\sigma$ )	$\sigma_8$	0.8408	$0.824^{+0.037}_{-0.042}$ (-0.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07181	$0.07167^{+0.00089}_{-0.00088}$ (+0.1 $\sigma$ )
$n_s$	0.9671	$0.9699^{+0.0098}_{-0.0093}$ (+0.4 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4661	$0.459^{+0.022}_{-0.023}$ (-0.1 $\sigma$ )	$H(0.57)$	93.20	$92.98^{+0.69}_{-0.71}$ (+0.0 $\sigma$ )
$y_{\text{cal}}$	1.00015	$1.0004^{+0.0050}_{-0.0050}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6260	$0.615^{+0.027}_{-0.030}$ (-0.1 $\sigma$ )	$D_A(0.57)$	1382.9	$1388^{+19}_{-17}$ (-0.1 $\sigma$ )
$A_{100}^{\text{PS}}$	247.8	$245^{+40}_{-40}$ (-0.5 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0202	$1.002^{+0.043}_{-0.048}$ (-0.1 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.67496	$0.6757^{+0.0041}_{-0.0040}$ (-0.1 $\sigma$ )
$A_{143}^{\text{PS}}$	35.6	$38^{+20}_{-20}$ (-0.6 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.495	$2.479^{+0.087}_{-0.085}$ (-0.2 $\sigma$ )	$f\sigma_8(0.57)$	0.4866	$0.479^{+0.020}_{-0.022}$ (-0.1 $\sigma$ )
$A_{217}^{\text{PS}}$	96.8	$98^{+30}_{-30}$ (+0.1 $\sigma$ )	$z_{\text{re}}$	9.85	$10.2^{+3.2}_{-3.4}$ (-0.0 $\sigma$ )	$\sigma_8(0.57)$	0.6261	$0.614^{+0.028}_{-0.032}$ (-0.0 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.5	$46^{+10}_{-10}$ (-2.7 $\sigma$ )	$10^9 A_s$	2.186	$2.21^{+0.17}_{-0.15}$ (-0.1 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246243	$0.24626^{+0.00016}_{-0.00017}$ (-4.4 $\sigma$ )
$A_{143}^{\text{tSZ}}$	3.52	< 6.68 (-1.0 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.8748	$1.872^{+0.024}_{-0.024}$ (-0.4 $\sigma$ )	$f_{2000}^{143}$	29.1	$29^{+6}_{-6}$ (-0.4 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.429	$0.52^{+0.23}_{-0.21}$	$D_{40}$	1229.2	$1226^{+27}_{-27}$ (-0.6 $\sigma$ )	$f_{2000}^{217}$	106.59	$106.2^{+3.9}_{-3.9}$ (+0.2 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{220}$	5696	$5700^{+81}_{-80}$ (-0.5 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.76	$31^{+4}_{-4}$ (-0.4 $\sigma$ )
$A^{\text{kSZ}}$	4.6	—	$D_{810}$	2528.6	$2530^{+28}_{-27}$ (-0.2 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10495.93	$10496.5$ ( $\nu$ : 2.8) (-0.3 $\sigma$ )
$A_{100}^{\text{dust}}$	0.970	$0.99^{+0.38}_{-0.38}$	$D_{1420}$	813.4	$815^{+10}_{-9.9}$ (-0.0 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	8044.6	$8059.8$ ( $\nu$ : 17.8)
$A_{143}^{\text{dust}}$	1.026	$1.02^{+0.36}_{-0.36}$	$n_{\text{s},0.002}$	0.9671	$0.9699^{+0.0098}_{-0.0093}$ (+0.4 $\sigma$ )	$\chi_{\text{6DF}}^2$	0.006	$0.067$ ( $\nu$ : 0.0) (-0.1 $\sigma$ )
$A_{217}^{\text{dust}}$	1.217	$1.22^{+0.23}_{-0.23}$	$Y_{\text{P}}$	0.244913	$0.24494^{+0.00017}_{-0.00016}$ (-4.5 $\sigma$ )	$\chi_{\text{MGS}}^2$	1.47	$1.36$ ( $\nu$ : 0.2) (+0.1 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.964	$0.98^{+0.35}_{-0.35}$	Age/Gyr	13.779	$13.807^{+0.081}_{-0.076}$ (-0.0 $\sigma$ )	$\chi_{\text{DR11CMass}}^2$	2.41	$2.94$ ( $\nu$ : 0.3) (-0.0 $\sigma$ )
$c_{100}$	0.99666	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	$z_*$	1090.03	$1089.90^{+0.61}_{-0.60}$ (-0.1 $\sigma$ )	$\chi_{\text{DR11LOWZ}}^2$	0.42	$0.76$ ( $\nu$ : 0.2) (-0.1 $\sigma$ )
$c_{217}$	0.99735	$0.9972^{+0.0036}_{-0.0035}$ (+0.9 $\sigma$ )	$r_*$	144.66	$144.85^{+0.72}_{-0.67}$ (+0.1 $\sigma$ )	$\chi_{\text{prior}}^2$	3.5	$8.5$ ( $\nu$ : 6.2) (+0.3 $\sigma$ )
$\beta_1^1$	-0.096	$-0.1^{+1.9}_{-2.0}$	$100\theta_*$	1.04115	$1.04123^{+0.00083}_{-0.00082}$ (+0.1 $\sigma$ )	$\chi_{\text{CMB}}^2$	18540.5	$18556.3$ ( $\nu$ : 16.7) (+1303.7 $\sigma$ )
$H_0$	67.93	$67.6^{+1.2}_{-1.3}$ (+0.1 $\sigma$ )	$z_{\text{drag}}$	1059.55	$1059.63^{+0.85}_{-0.87}$ (-0.0 $\sigma$ )	$\chi_{\text{BAO}}^2$	4.31	$5.1$ ( $\nu$ : 0.7) (-0.0 $\sigma$ )

Best-fit  $\chi_{\text{eff}}^2 = 18548.40$ ;  $\Delta\chi_{\text{eff}}^2 = 7282.55$ ;  $\bar{\chi}_{\text{eff}}^2 = 18569.95$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7282.68$ ;  $R - 1 = 0.01124$  $\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 ( $\Delta$  0.00) MGS: 1.47 ( $\Delta$  0.00) DR11CMass: 2.41 ( $\Delta$  -0.01) DR11LOWZ: 0.42 ( $\Delta$  -0.00) CMB - lowl.SMW\_70.dx11d.2014.10.03\_v5c\_Ap: 10495.93 ( $\Delta$  -0.56) CamSpec like.v9.10CMH\_unified: 8044.63



## 7.46 base\_mnu\_CamSpecHM\_TT\_lowTEB\_BAO\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00039}_{-0.00039} \quad (-0.0\sigma)$	$\Omega_m$	$0.309^{+0.016}_{-0.015} \quad (-0.1\sigma)$	$100\theta_D$	$0.16091^{+0.00051}_{-0.00049} \quad (-0.0\sigma)$
$\Omega_c h^2$	$0.1186^{+0.0029}_{-0.0029} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1417^{+0.0023}_{-0.0024} \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3366^{+62}_{-67} \quad (-0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04103^{+0.00084}_{-0.00082} \quad (+0.1\sigma)$	$\Omega_\nu h^2$	$< 0.00221 \quad (+0.0\sigma)$	$100\theta_{\text{eq}}$	$0.820^{+0.013}_{-0.012} \quad (+0.1\sigma)$
$\tau$	$0.082^{+0.038}_{-0.036} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.0960^{+0.0012}_{-0.0012} \quad (-0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07174^{+0.00087}_{-0.00087} \quad (+0.1\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.206 \quad (+0.0\sigma)$	$\sigma_8$	$0.825^{+0.036}_{-0.041} \quad (-0.1\sigma)$	$H(0.57)$	$93.03^{+0.63}_{-0.70} \quad (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.093^{+0.073}_{-0.071} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.022}_{-0.023} \quad (-0.1\sigma)$	$D_A(0.57)$	$1386^{+18}_{-16} \quad (-0.1\sigma)$
$n_s$	$0.9702^{+0.0098}_{-0.0092} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.615^{+0.027}_{-0.030} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6754^{+0.0041}_{-0.0039} \quad (-0.1\sigma)$
$y_{\text{cal}}$	$1.0004^{+0.0050}_{-0.0049} \quad (+0.0\sigma)$	$\sigma_8/h^{0.5}$	$1.003^{+0.042}_{-0.047} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.480^{+0.020}_{-0.021} \quad (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} \quad (-0.4\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.478^{+0.087}_{-0.085} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.615^{+0.027}_{-0.031} \quad (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$38^{+20}_{-20} \quad (-0.6\sigma)$	$z_{\text{re}}$	$10.2^{+3.2}_{-3.4} \quad (-0.0\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24627^{+0.00016}_{-0.00017} \quad (-4.5\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s$	$2.21^{+0.17}_{-0.15} \quad (-0.1\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-6} \quad (-0.4\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.024}_{-0.024} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$106.1^{+3.9}_{-4.0} \quad (+0.2\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.76 \quad (-1.0\sigma)$	$D_{40}$	$1226^{+27}_{-27} \quad (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.3\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.21}$	$D_{220}$	$5701^{+81}_{-80} \quad (-0.5\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.5 \quad (\nu: 2.9) \quad (-0.3\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2530^{+28}_{-27} \quad (-0.2\sigma)$	$\chi_{\text{CamSpec}}^2$	$8059.8 \quad (\nu: 17.8)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$815^{+10}_{-10} \quad (+0.0\sigma)$	$\chi_{\text{H070p6}}^2$	$0.79 \quad (\nu: 0.1) \quad (-0.1\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$n_{s,0.002}$	$0.9702^{+0.0098}_{-0.0092} \quad (+0.4\sigma)$	$\chi_{6\text{DF}}^2$	$0.057 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.35}$	$Y_{\text{P}}$	$0.24494^{+0.00017}_{-0.00016} \quad (-4.5\sigma)$	$\chi_{\text{MGS}}^2$	$1.45 \quad (\nu: 0.2) \quad (+0.1\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$\text{Age/Gyr}$	$13.802^{+0.078}_{-0.074} \quad (-0.0\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.89 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$z_*$	$1089.87^{+0.61}_{-0.60} \quad (-0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.66 \quad (\nu: 0.2) \quad (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$r_*$	$144.86^{+0.71}_{-0.67} \quad (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.2) \quad (+0.3\sigma)$
$c_{217}$	$0.9972^{+0.0036}_{-0.0035} \quad (+0.9\sigma)$	$100\theta_*$	$1.04125^{+0.00084}_{-0.00082} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18556.3 \quad (\nu: 16.7) \quad (+1310.0\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	$1059.65^{+0.86}_{-0.86} \quad (-0.0\sigma)$	$\chi_{\text{BAO}}^2$	$5.1 \quad (\nu: 0.5) \quad (-0.0\sigma)$
$H_0$	$67.7^{+1.2}_{-1.3} \quad (+0.1\sigma)$	$r_{\text{drag}}$	$147.56^{+0.75}_{-0.72} \quad (+0.1\sigma)$		
$\Omega_\Lambda$	$0.691^{+0.015}_{-0.016} \quad (+0.1\sigma)$	$k_D$	$0.14034^{+0.00089}_{-0.00091} \quad (-0.0\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18570.62; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.68; R - 1 = 0.01276$$

## 7.47 base\_mnu\_CamSpecHM\_TT\_lowTEB\_BAO\_post\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02231^{+0.00039}_{-0.00039} \quad (-0.0\sigma)$	$\Omega_m$	$0.308^{+0.016}_{-0.015} \quad (-0.1\sigma)$	$100\theta_D$	$0.16090^{+0.00051}_{-0.00049} \quad (-0.0\sigma)$
$\Omega_c h^2$	$0.1185^{+0.0028}_{-0.0028} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1416^{+0.0023}_{-0.0023} \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3364^{+62}_{-66} \quad (-0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04105^{+0.00084}_{-0.00081} \quad (+0.1\sigma)$	$\Omega_\nu h^2$	$< 0.00215 \quad (+0.0\sigma)$	$100\theta_{\text{eq}}$	$0.820^{+0.012}_{-0.012} \quad (+0.1\sigma)$
$\tau$	$0.082^{+0.038}_{-0.036} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.0960^{+0.0012}_{-0.0012} \quad (-0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07178^{+0.00084}_{-0.00085} \quad (+0.1\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.200 \quad (+0.0\sigma)$	$\sigma_8$	$0.826^{+0.036}_{-0.041} \quad (-0.1\sigma)$	$H(0.57)$	$93.06^{+0.61}_{-0.68} \quad (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.094^{+0.074}_{-0.071} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.022}_{-0.022} \quad (-0.1\sigma)$	$D_A(0.57)$	$1386^{+17}_{-16} \quad (-0.0\sigma)$
$n_s$	$0.9704^{+0.0096}_{-0.0098} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.615^{+0.027}_{-0.029} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6752^{+0.0039}_{-0.0038} \quad (-0.1\sigma)$
$y_{\text{cal}}$	$1.0004^{+0.0050}_{-0.0049} \quad (+0.0\sigma)$	$\sigma_8/h^{0.5}$	$1.003^{+0.042}_{-0.047} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.480^{+0.020}_{-0.021} \quad (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} \quad (-0.4\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.477^{+0.087}_{-0.085} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.615^{+0.027}_{-0.031} \quad (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$38^{+20}_{-20} \quad (-0.6\sigma)$	$z_{\text{re}}$	$10.3^{+3.2}_{-3.4} \quad (-0.0\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24627^{+0.00016}_{-0.00017} \quad (-4.5\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s$	$2.21^{+0.17}_{-0.15} \quad (-0.1\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-6} \quad (-0.4\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.871^{+0.024}_{-0.024} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$106.1^{+3.9}_{-4.0} \quad (+0.2\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.76 \quad (-1.0\sigma)$	$D_{40}$	$1225^{+27}_{-27} \quad (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.3\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.21}$	$D_{220}$	$5701^{+81}_{-80} \quad (-0.5\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.5 \quad (\nu: 2.9) \quad (-0.3\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2530^{+28}_{-27} \quad (-0.2\sigma)$	$\chi_{\text{CamSpec}}^2$	$8059.8 \quad (\nu: 17.9)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$815^{+10}_{-10} \quad (+0.0\sigma)$	$\chi_{\text{H070p6}}^2$	$0.75 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$n_{s,0.002}$	$0.9704^{+0.0096}_{-0.0098} \quad (+0.4\sigma)$	$\chi_{\text{JLA}}^2$	$706.71 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.35}$	$Y_{\text{P}}$	$0.24495^{+0.00017}_{-0.00016} \quad (-4.5\sigma)$	$\chi_{6\text{DF}}^2$	$0.050 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$\text{Age/Gyr}$	$13.799^{+0.076}_{-0.072} \quad (-0.0\sigma)$	$\chi_{\text{MGS}}^2$	$1.50 \quad (\nu: 0.2) \quad (+0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$z_*$	$1089.85^{+0.60}_{-0.59} \quad (-0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.86 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$r_*$	$144.88^{+0.70}_{-0.66} \quad (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.60 \quad (\nu: 0.2) \quad (-0.1\sigma)$
$c_{217}$	$0.9972^{+0.0036}_{-0.0035} \quad (+0.9\sigma)$	$100\theta_*$	$1.04126^{+0.00084}_{-0.00081} \quad (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.2) \quad (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$z_{\text{drag}}$	$1059.66^{+0.85}_{-0.87} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18556.3 \quad (\nu: 16.7) \quad (+1311.7\sigma)$
$H_0$	$67.8^{+1.2}_{-1.2} \quad (+0.1\sigma)$	$r_{\text{drag}}$	$147.57^{+0.74}_{-0.72} \quad (+0.1\sigma)$	$\chi_{\text{BAO}}^2$	$5.01 \quad (\nu: 0.5) \quad (-0.0\sigma)$
$\Omega_\Lambda$	$0.692^{+0.015}_{-0.016} \quad (+0.1\sigma)$	$k_D$	$0.14033^{+0.00089}_{-0.00091} \quad (-0.0\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 19277.26; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.68; R - 1 = 0.01283$$

## 7.48 base\_mnu\_CamSpecHM\_TTTEEE\_lowTEB\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022348	$0.02238^{+0.00030}_{-0.00030}$ (+0.7 $\sigma$ )	$H_0$	68.03	$67.7^{+1.2}_{-1.2}$ (+0.2 $\sigma$ )	$r_{\text{drag}}$	147.32	$147.41^{+0.54}_{-0.51}$ (+0.1 $\sigma$ )
$\Omega_c h^2$	0.11928	$0.1188^{+0.0022}_{-0.0022}$ (-0.5 $\sigma$ )	$\Omega_\Lambda$	0.6938	$0.690^{+0.015}_{-0.015}$ (+0.2 $\sigma$ )	$k_D$	0.14063	$0.14056^{+0.00062}_{-0.00064}$ (+0.2 $\sigma$ )
$100\theta_{\text{MC}}$	1.04084	$1.04087^{+0.00057}_{-0.00057}$ (+0.1 $\sigma$ )	$\Omega_m$	0.3062	$0.310^{+0.015}_{-0.015}$ (-0.2 $\sigma$ )	$100\theta_D$	0.160784	$0.16076^{+0.00037}_{-0.00036}$ (-0.7 $\sigma$ )
$\tau$	0.0745	$0.080^{+0.035}_{-0.035}$ (-0.1 $\sigma$ )	$\Omega_m h^2$	0.14173	$0.1420^{+0.0020}_{-0.0020}$ (-0.2 $\sigma$ )	$z_{\text{eq}}$	3384	$3373^{+49}_{-51}$ (-0.4 $\sigma$ )
$\Sigma m_\nu$ [eV]	0.009	< 0.197 (+0.3 $\sigma$ )	$\Omega_\nu h^2$	0.000099	< 0.00212 (+0.3 $\sigma$ )	$100\theta_{\text{eq}}$	0.8163	$0.8186^{+0.0098}_{-0.0093}$ (+0.4 $\sigma$ )
$\ln(10^{10} A_s)$	3.079	$3.090^{+0.068}_{-0.068}$ (-0.2 $\sigma$ )	$\Omega_m h^3$	0.09642	$0.09608^{+0.00090}_{-0.00096}$ (+0.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07185	$0.07165^{+0.00078}_{-0.00081}$ (+0.2 $\sigma$ )
$n_s$	0.9672	$0.9690^{+0.0083}_{-0.0083}$ (+0.7 $\sigma$ )	$\sigma_8$	0.8361	$0.824^{+0.035}_{-0.037}$ (-0.5 $\sigma$ )	$H(0.57)$	93.26	$93.03^{+0.62}_{-0.64}$ (+0.2 $\sigma$ )
$y_{\text{cal}}$	0.99992	$1.0003^{+0.0050}_{-0.0049}$ (-0.1 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4626	$0.459^{+0.018}_{-0.018}$ (-0.6 $\sigma$ )	$D_A(0.57)$	1381.4	$1387^{+17}_{-17}$ (-0.2 $\sigma$ )
$A_{100}^{\text{PS}}$	246.4	$244^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6219	$0.615^{+0.023}_{-0.025}$ (-0.6 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.67467	$0.6757^{+0.0038}_{-0.0035}$ (-0.2 $\sigma$ )
$A_{143}^{\text{PS}}$	34.8	$38^{+10}_{-10}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0136	$1.001^{+0.037}_{-0.042}$ (-0.6 $\sigma$ )	$f\sigma_8(0.57)$	0.4838	$0.479^{+0.017}_{-0.019}$ (-0.5 $\sigma$ )
$A_{217}^{\text{PS}}$	97.1	$99^{+30}_{-30}$ (+0.1 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.485	$2.478^{+0.076}_{-0.078}$ (-0.6 $\sigma$ )	$\sigma_8(0.57)$	0.6229	$0.613^{+0.027}_{-0.028}$ (-0.4 $\sigma$ )
$A_{217}^{\text{CIB}}$	46.8	$45^{+10}_{-10}$ (-2.8 $\sigma$ )	$z_{\text{re}}$	9.61	$10.0^{+3.2}_{-3.3}$ (-0.1 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246293	$0.24631^{+0.00012}_{-0.00013}$ (-5.9 $\sigma$ )
$A_{143}^{\text{tSZ}}$	3.54	< 6.81 (-1.1 $\sigma$ )	$10^9 A_s$	2.174	$2.20^{+0.15}_{-0.15}$ (-0.2 $\sigma$ )	$f_{2000}^{143}$	28.7	$28^{+5}_{-5}$ (-0.4 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.420	$0.52^{+0.23}_{-0.22}$	$10^9 A_s e^{-2\tau}$	1.8733	$1.873^{+0.022}_{-0.022}$ (-0.7 $\sigma$ )	$f_{2000}^{217}$	106.17	$105.9^{+3.7}_{-3.7}$ (+0.1 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1228.8	$1228^{+25}_{-24}$ (-0.9 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.25	$31^{+4}_{-4}$ (-0.5 $\sigma$ )
$A^{\text{kSZ}}$	4.6	—	$D_{220}$	5707	$5713^{+78}_{-76}$ (-0.5 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10495.75	10496.5 ( $\nu$ : 2.3) (-0.5 $\sigma$ )
$A_{100}^{\text{dust}}$	0.978	$0.99^{+0.38}_{-0.38}$	$D_{810}$	2527.9	$2530^{+28}_{-26}$ (-0.4 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	12935.5	12952.4 ( $\nu$ : 18.2)
$A_{143}^{\text{dust}}$	1.021	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	813.7	$815.1^{+9.5}_{-9.3}$ (+0.0 $\sigma$ )	$\chi_{6\text{DF}}^2$	0.003	0.061 ( $\nu$ : 0.0) (-0.1 $\sigma$ )
$A_{217}^{\text{dust}}$	1.226	$1.22^{+0.23}_{-0.22}$	$n_{s,0.002}$	0.9672	$0.9690^{+0.0083}_{-0.0083}$ (+0.7 $\sigma$ )	$\chi_{\text{MGS}}^2$	1.54	1.33 ( $\nu$ : 0.1) (+0.3 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.974	$0.98^{+0.35}_{-0.35}$	$Y_{\text{P}}$	0.244962	$0.24498^{+0.00013}_{-0.00012}$ (-5.9 $\sigma$ )	$\chi_{\text{DR11CMass}}^2$	2.43	2.88 ( $\nu$ : 0.2) (-0.1 $\sigma$ )
$c_{100}$	0.99667	$0.9968^{+0.0019}_{-0.0019}$ (-1.7 $\sigma$ )	Age/Gyr	13.772	$13.799^{+0.070}_{-0.065}$ (-0.2 $\sigma$ )	$\chi_{\text{DR11LOWZ}}^2$	0.37	0.76 ( $\nu$ : 0.2) (-0.2 $\sigma$ )
$c_{217}$	0.99727	$0.9970^{+0.0034}_{-0.0035}$ (+0.8 $\sigma$ )	$z_*$	1089.862	$1089.78^{+0.48}_{-0.49}$ (-0.7 $\sigma$ )	$\chi_{\text{prior}}^2$	3.7	9.0 ( $\nu$ : 6.3) (-1.9 $\sigma$ )
$c_{TE}$	1.0042	$1.0043^{+0.0088}_{-0.0086}$	$r_*$	144.64	$144.74^{+0.52}_{-0.50}$ (+0.2 $\sigma$ )	$\chi_{\text{CMB}}^2$	23431.3	23449.0 ( $\nu$ : 17.8) (+1574.3 $\sigma$ )
$c_{EE}$	1.0009	$1.0010^{+0.0083}_{-0.0082}$	$100\theta_*$	1.04101	$1.04107^{+0.00057}_{-0.00057}$ (+0.2 $\sigma$ )	$\chi_{\text{BAO}}^2$	4.34	5.0 ( $\nu$ : 0.5) (-0.1 $\sigma$ )
$\beta_1^1$	-0.06	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	1059.82	$1059.87^{+0.66}_{-0.62}$ (+0.5 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 23439.39$ ;  $\Delta\chi_{\text{eff}}^2 = 10500.06$ ;  $\bar{\chi}_{\text{eff}}^2 = 23462.96$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 10490.54$ ;  $R - 1 = 0.01096$   
 $\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 ( $\Delta$  -0.00) MGS: 1.54 ( $\Delta$  0.07) DR11CMass: 2.43 ( $\Delta$  0.01) DR11LOWZ: 0.37 ( $\Delta$  -0.06) CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.75  
( $\Delta$  -1.19) CamSpec like\_v9.10CMH\_unified: 12935.55

### 7.49 base\_mnu\_CamSpecHM\_TTTEEE\_lowTEB\_BAO\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00030}_{-0.00030} \quad (+0.7\sigma)$	$H_0$	$67.8^{+1.1}_{-1.2} \quad (+0.3\sigma)$	$r_{\text{drag}}$	$147.42^{+0.54}_{-0.51} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1187^{+0.0021}_{-0.0022} \quad (-0.5\sigma)$	$\Omega_\Lambda$	$0.691^{+0.013}_{-0.015} \quad (+0.3\sigma)$	$k_D$	$0.14056^{+0.00061}_{-0.00063} \quad (+0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04088^{+0.00056}_{-0.00057} \quad (+0.1\sigma)$	$\Omega_m$	$0.309^{+0.015}_{-0.013} \quad (-0.3\sigma)$	$100\theta_D$	$0.16075^{+0.00038}_{-0.00036} \quad (-0.7\sigma)$
$\tau$	$0.080^{+0.035}_{-0.035} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1419^{+0.0020}_{-0.0020} \quad (-0.3\sigma)$	$z_{\text{eq}}$	$3371^{+48}_{-50} \quad (-0.4\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.185 \quad (+0.3\sigma)$	$\Omega_\nu h^2$	$< 0.00199 \quad (+0.3\sigma)$	$100\theta_{\text{eq}}$	$0.8190^{+0.0097}_{-0.0091} \quad (+0.4\sigma)$
$\ln(10^{10} A_s)$	$3.090^{+0.067}_{-0.068} \quad (-0.2\sigma)$	$\Omega_m h^3$	$0.09612^{+0.00087}_{-0.00092} \quad (+0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07171^{+0.00076}_{-0.00078} \quad (+0.3\sigma)$
$n_s$	$0.9692^{+0.0082}_{-0.0082} \quad (+0.7\sigma)$	$\sigma_8$	$0.825^{+0.034}_{-0.036} \quad (-0.5\sigma)$	$H(0.57)$	$93.08^{+0.59}_{-0.62} \quad (+0.2\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.018}_{-0.018} \quad (-0.6\sigma)$	$D_A(0.57)$	$1386^{+16}_{-16} \quad (-0.3\sigma)$
$A_{100}^{\text{PS}}$	$243^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.615^{+0.023}_{-0.025} \quad (-0.6\sigma)$	$F_{\text{AP}}(0.57)$	$0.6754^{+0.0037}_{-0.0034} \quad (-0.3\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} \quad (-0.7\sigma)$	$\sigma_8/h^{0.5}$	$1.002^{+0.037}_{-0.040} \quad (-0.5\sigma)$	$f\sigma_8(0.57)$	$0.479^{+0.017}_{-0.018} \quad (-0.5\sigma)$
$A_{217}^{\text{PS}}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.478^{+0.076}_{-0.078} \quad (-0.6\sigma)$	$\sigma_8(0.57)$	$0.614^{+0.026}_{-0.028} \quad (-0.4\sigma)$
$A_{217}^{\text{CIB}}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$z_{\text{re}}$	$10.1^{+3.2}_{-3.3} \quad (-0.1\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24631^{+0.00012}_{-0.00013} \quad (-5.9\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.81 \quad (-1.1\sigma)$	$10^9 A_s$	$2.20^{+0.15}_{-0.15} \quad (-0.2\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.4\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.22}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.022}_{-0.022} \quad (-0.7\sigma)$	$f_{2000}^{217}$	$105.8^{+3.7}_{-3.7} \quad (+0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1228^{+25}_{-25} \quad (-0.9\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.5\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5713^{+78}_{-76} \quad (-0.5\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.5 \quad (\nu: 2.3) \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{810}$	$2530^{+28}_{-26} \quad (-0.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$12952.3 \quad (\nu: 18.2)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.37}$	$D_{1420}$	$815.2^{+9.5}_{-9.2} \quad (+0.0\sigma)$	$\chi_{\text{H070p6}}^2$	$0.76 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.9692^{+0.0082}_{-0.0082} \quad (+0.7\sigma)$	$\chi_{6\text{DF}}^2$	$0.051 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.34}$	$Y_{\text{P}}$	$0.24498^{+0.00013}_{-0.00012} \quad (-6.0\sigma)$	$\chi_{\text{MGS}}^2$	$1.41 \quad (\nu: 0.1) \quad (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$\text{Age/Gyr}$	$13.794^{+0.067}_{-0.063} \quad (-0.2\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.82 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0036} \quad (+0.8\sigma)$	$z_*$	$1089.76^{+0.49}_{-0.48} \quad (-0.7\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.67 \quad (\nu: 0.2) \quad (-0.2\sigma)$
$c_{TE}$	$1.0042^{+0.0088}_{-0.0086}$	$r_*$	$144.76^{+0.52}_{-0.49} \quad (+0.2\sigma)$	$\chi_{\text{prior}}^2$	$9.0 \quad (\nu: 6.3) \quad (-1.9\sigma)$
$c_{EE}$	$1.0010^{+0.0083}_{-0.0082}$	$100\theta_*$	$1.04109^{+0.00056}_{-0.00056} \quad (+0.2\sigma)$	$\chi_{\text{CMB}}^2$	$23448.9 \quad (\nu: 17.8) \quad (+1579.8\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	$1059.88^{+0.62}_{-0.63} \quad (+0.6\sigma)$	$\chi_{\text{BAO}}^2$	$4.95 \quad (\nu: 0.4) \quad (-0.0\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 23463.56; \Delta\bar{\chi}_{\text{eff}}^2 = 10490.51; R - 1 = 0.01058$$

## 7.50 base\_mnu\_CamSpecHM\_TTTEEE\_lowTEB\_BAO\_post\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00030}_{-0.00029} \quad (+0.7\sigma)$	$\Omega_\Lambda$	$0.691^{+0.013}_{-0.014} \quad (+0.3\sigma)$	$100\theta_D$	$0.16074^{+0.00038}_{-0.00036} \quad (-0.7\sigma)$
$\Omega_c h^2$	$0.1186^{+0.0021}_{-0.0022} \quad (-0.4\sigma)$	$\Omega_m$	$0.309^{+0.014}_{-0.013} \quad (-0.3\sigma)$	$z_{\text{eq}}$	$3370^{+48}_{-50} \quad (-0.4\sigma)$
$100\theta_{\text{MC}}$	$1.04089^{+0.00056}_{-0.00057} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1418^{+0.0019}_{-0.0019} \quad (-0.3\sigma)$	$100\theta_{\text{eq}}$	$0.8192^{+0.0095}_{-0.0090} \quad (+0.4\sigma)$
$\tau$	$0.081^{+0.035}_{-0.035} \quad (-0.1\sigma)$	$\Omega_\nu h^2$	$< 0.00192 \quad (+0.3\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07175^{+0.00074}_{-0.00076} \quad (+0.3\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.179 \quad (+0.3\sigma)$	$\Omega_m h^3$	$0.09614^{+0.00085}_{-0.00090} \quad (+0.1\sigma)$	$H(0.57)$	$93.10^{+0.57}_{-0.60} \quad (+0.2\sigma)$
$\ln(10^{10} A_s)$	$3.091^{+0.067}_{-0.068} \quad (-0.2\sigma)$	$\sigma_8$	$0.826^{+0.031}_{-0.036} \quad (-0.5\sigma)$	$D_A(0.57)$	$1385^{+16}_{-15} \quad (-0.3\sigma)$
$n_s$	$0.9693^{+0.0082}_{-0.0081} \quad (+0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.018}_{-0.018} \quad (-0.6\sigma)$	$F_{\text{AP}}(0.57)$	$0.6753^{+0.0035}_{-0.0033} \quad (-0.3\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0050} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.615^{+0.023}_{-0.025} \quad (-0.5\sigma)$	$f\sigma_8(0.57)$	$0.480^{+0.017}_{-0.018} \quad (-0.5\sigma)$
$A_{100}^{\text{PS}}$	$243^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.003^{+0.037}_{-0.040} \quad (-0.5\sigma)$	$\sigma_8(0.57)$	$0.615^{+0.026}_{-0.027} \quad (-0.4\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} \quad (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.478^{+0.076}_{-0.078} \quad (-0.6\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24632^{+0.00012}_{-0.00013} \quad (-6.0\sigma)$
$A_{217}^{\text{PS}}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$10.1^{+3.1}_{-3.2} \quad (-0.1\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.4\sigma)$
$A_{217}^{\text{CIB}}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.20^{+0.15}_{-0.15} \quad (-0.2\sigma)$	$f_{2000}^{217}$	$105.8^{+3.7}_{-3.7} \quad (+0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.81 \quad (-1.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.022}_{-0.022} \quad (-0.7\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.5\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.22}$	$D_{40}$	$1228^{+25}_{-24} \quad (-0.9\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.5 \quad (\nu: 2.3) \quad (-0.5\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5713^{+78}_{-76} \quad (-0.5\sigma)$	$\chi_{\text{CamSpec}}^2$	$12952.3 \quad (\nu: 18.2)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2530^{+28}_{-26} \quad (-0.4\sigma)$	$\chi_{\text{H070p6}}^2$	$0.74 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{1420}$	$815.2^{+9.5}_{-9.2} \quad (+0.0\sigma)$	$\chi_{\text{JLA}}^2$	$706.71 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.37}$	$n_{\text{s},0.002}$	$0.9693^{+0.0082}_{-0.0081} \quad (+0.7\sigma)$	$\chi_{6\text{DF}}^2$	$0.045 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.22}_{-0.23}$	$Y_{\text{P}}$	$0.24499^{+0.00013}_{-0.00012} \quad (-6.0\sigma)$	$\chi_{\text{MGS}}^2$	$1.46 \quad (\nu: 0.1) \quad (+0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.34}$	$\text{Age}/\text{Gyr}$	$13.792^{+0.065}_{-0.061} \quad (-0.2\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.79 \quad (\nu: 0.1) \quad (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.74^{+0.48}_{-0.48} \quad (-0.7\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.61 \quad (\nu: 0.1) \quad (-0.2\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0036} \quad (+0.8\sigma)$	$r_*$	$144.77^{+0.51}_{-0.49} \quad (+0.2\sigma)$	$\chi_{\text{prior}}^2$	$9.0 \quad (\nu: 6.3) \quad (-1.9\sigma)$
$c_{TE}$	$1.0042^{+0.0088}_{-0.0087}$	$100\theta_*$	$1.04109^{+0.00056}_{-0.00056} \quad (+0.2\sigma)$	$\chi_{\text{CMB}}^2$	$23448.9 \quad (\nu: 17.8) \quad (+1579.1\sigma)$
$c_{EE}$	$1.0010^{+0.0083}_{-0.0082}$	$z_{\text{drag}}$	$1059.89^{+0.62}_{-0.64} \quad (+0.6\sigma)$	$\chi_{\text{BAO}}^2$	$4.90 \quad (\nu: 0.3) \quad (-0.0\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_{\text{drag}}$	$147.43^{+0.53}_{-0.51} \quad (+0.1\sigma)$		
$H_0$	$67.8^{+1.0}_{-1.1} \quad (+0.3\sigma)$	$k_D$	$0.14055^{+0.00061}_{-0.00063} \quad (+0.2\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 24170.18; \Delta\bar{\chi}_{\text{eff}}^2 = 10490.47; R - 1 = 0.01108$$

## 7.51 base\_mnu\_plikHM\_TT\_lowTEB\_lensing\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022256	$0.02227^{+0.00040}_{-0.00040}$	$\Omega_\nu h^2$	0.00069	$< 0.00273$	$k_D$	0.14024	$0.14017^{+0.00082}_{-0.00085}$
$\Omega_c h^2$	0.11859	$0.1181^{+0.0027}_{-0.0027}$	$\Omega_m h^3$	0.09599	$0.0957^{+0.0012}_{-0.0013}$	$100\theta_D$	0.16098	$0.16097^{+0.00050}_{-0.00050}$
$100\theta_{MC}$	1.04101	$1.04105^{+0.00079}_{-0.00081}$	$\sigma_8$	0.8162	$0.808^{+0.028}_{-0.029}$	$z_{eq}$	3366	$3356^{+61}_{-63}$
$\tau$	0.0654	$0.073^{+0.035}_{-0.034}$	$\sigma_8 \Omega_m^{0.5}$	0.4528	$0.450^{+0.014}_{-0.015}$	$k_{eq}$	0.010273	$0.01024^{+0.00019}_{-0.00019}$
$\Sigma m_\nu$ [eV]	0.064	$< 0.254$	$\sigma_8 \Omega_m^{0.25}$	0.6079	$0.603^{+0.019}_{-0.019}$	$100\theta_{eq}$	0.8196	$0.822^{+0.012}_{-0.012}$
$\ln(10^{10} A_s)$	3.062	$3.075^{+0.066}_{-0.063}$	$\sigma_8/h^{0.5}$	0.9911	$0.983^{+0.030}_{-0.031}$	$100\theta_{s,eq}$	0.4528	$0.4538^{+0.0062}_{-0.0059}$
$n_s$	0.9680	$0.9687^{+0.0095}_{-0.0090}$	$\langle d^2 \rangle^{1/2}$	2.446	$2.450^{+0.051}_{-0.051}$	$r_{drag}/D_V(0.57)$	0.07182	$0.07167^{+0.00090}_{-0.00094}$
$y_{cal}$	1.00014	$1.0003^{+0.0048}_{-0.0047}$	$z_{re}$	8.78	$9.4^{+3.1}_{-3.1}$	$H(0.57)$	93.07	$92.89^{+0.75}_{-0.78}$
$A_{217}^{CIB}$	67.5	$64^{+10}_{-10}$	$10^9 A_s$	2.136	$2.17^{+0.14}_{-0.14}$	$D_A(0.57)$	1384.9	$1389^{+21}_{-18}$
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8742	$1.872^{+0.023}_{-0.022}$	$F_{AP}(0.57)$	0.67506	$0.6758^{+0.0044}_{-0.0041}$
$A_{143}^{tSZ}$	7.17	$5.1^{+3.7}_{-3.8}$	$D_{40}$	1225.3	$1227^{+23}_{-22}$	$f\sigma_8(0.57)$	0.4738	$0.471^{+0.012}_{-0.014}$
$A_{100}^{PS}$	254	$259^{+50}_{-50}$	$D_{220}$	5715	$5719^{+77}_{-77}$	$\sigma_8(0.57)$	0.6082	$0.602^{+0.022}_{-0.023}$
$A_{143}^{PS}$	39.4	$44^{+20}_{-20}$	$D_{810}$	2532.7	$2532^{+26}_{-26}$	$f_{2000}^{143}$	30.0	$30^{+6}_{-6}$
$A_{143 \times 217}^{PS}$	33	$39^{+20}_{-20}$	$D_{1420}$	814.9	$814.9^{+9.7}_{-9.7}$	$f_{2000}^{143 \times 217}$	32.60	$33^{+4}_{-4}$
$A_{217}^{PS}$	97.1	$96^{+20}_{-20}$	$D_{2000}$	230.17	$230.2^{+3.4}_{-3.4}$	$f_{2000}^{217}$	106.15	$106.2^{+3.8}_{-3.8}$
$A^{kSZ}$	0.0	—	$n_{s,0.002}$	0.9680	$0.9687^{+0.0095}_{-0.0090}$	$\chi^2_{lensing}$	9.39	$9.7 (\nu: 1.0)$
$A_{100}^{dustTT}$	7.47	$7.5^{+3.7}_{-3.7}$	$Y_P$	0.245343	$0.24535^{+0.00018}_{-0.00018}$	$\chi^2_{lowTEB}$	10494.90	$10495.8 (\nu: 1.1)$
$A_{143}^{dustTT}$	9.07	$9.1^{+3.6}_{-3.6}$	$Y_P^{BBN}$	0.246669	$0.24667^{+0.00018}_{-0.00018}$	$\chi^2_{plik}$	766.2	$779.5 (\nu: 15.1)$
$A_{143 \times 217}^{dustTT}$	17.7	$17.1^{+8.1}_{-8.2}$	$10^5 D/H$	2.613	$2.610^{+0.076}_{-0.075}$	$\chi^2_{6DF}$	0.006	$0.072 (\nu: 0.0)$
$A_{217}^{dustTT}$	81.9	$82^{+10}_{-10}$	Age/Gyr	13.797	$13.819^{+0.088}_{-0.083}$	$\chi^2_{MGS}$	1.47	$1.36 (\nu: 0.2)$
$c_{100}$	0.99789	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1089.94	$1089.88^{+0.63}_{-0.62}$	$\chi^2_{DR11CMass}$	2.40	$2.98 (\nu: 0.4)$
$c_{217}$	0.99599	$0.9960^{+0.0028}_{-0.0028}$	$r_*$	144.89	$144.98^{+0.66}_{-0.64}$	$\chi^2_{DR11LOWZ}$	0.42	$0.78 (\nu: 0.2)$
$H_0$	67.82	$67.5^{+1.3}_{-1.4}$	$100\theta_*$	1.04121	$1.04127^{+0.00079}_{-0.00080}$	$\chi^2_{prior}$	2.1	$7.3 (\nu: 6.4)$
$\Omega_\Lambda$	0.6923	$0.689^{+0.017}_{-0.018}$	$D_A/\text{Gpc}$	13.915	$13.924^{+0.063}_{-0.061}$	$\chi^2_{CMB}$	11270.5	$11285.0 (\nu: 15.2)$
$\Omega_m$	0.3077	$0.311^{+0.018}_{-0.017}$	$z_{drag}$	1059.55	$1059.58^{+0.89}_{-0.86}$	$\chi^2_{BAO}$	4.30	$5.2 (\nu: 0.8)$
$\Omega_m h^2$	0.14154	$0.1417^{+0.0023}_{-0.0023}$	$r_{drag}$	147.60	$147.69^{+0.69}_{-0.67}$			

Best-fit  $\chi^2_{eff} = 11276.91$ ;  $\bar{\chi}^2_{eff} = 11297.54$ ;  $R - 1 = 0.00541$

$\chi^2_{eff}$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMass: 2.40 DR11LOWZ: 0.42 CMB - smica\_g30\_ftl\_full\_pp: 9.39 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.90 plik\_dx11dr2\_HM\_v18\_TT: 766.20

## 7.52 base\_mnu\_plikHM\_TT\_lowTEB\_lensing\_BAO\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022290	$0.02229^{+0.00040}_{-0.00039}$	$\Omega_\nu h^2$	0.00055	$< 0.00257$	$k_D$	0.14030	$0.14017^{+0.00082}_{-0.00085}$
$\Omega_c h^2$	0.11855	$0.1181^{+0.0027}_{-0.0027}$	$\Omega_m h^3$	0.09613	$0.0957^{+0.0012}_{-0.0012}$	$100\theta_D$	0.160939	$0.16096^{+0.00050}_{-0.00049}$
$100\theta_{MC}$	1.04104	$1.04107^{+0.00078}_{-0.00081}$	$\sigma_8$	0.8183	$0.810^{+0.027}_{-0.028}$	$z_{eq}$	3366	$3354^{+60}_{-62}$
$\tau$	0.0646	$0.073^{+0.035}_{-0.033}$	$\sigma_8 \Omega_m^{0.5}$	0.4525	$0.450^{+0.014}_{-0.015}$	$k_{eq}$	0.010272	$0.01024^{+0.00018}_{-0.00019}$
$\Sigma m_\nu$ [eV]	0.051	$< 0.239$	$\sigma_8 \Omega_m^{0.25}$	0.6085	$0.604^{+0.017}_{-0.019}$	$100\theta_{eq}$	0.8197	$0.822^{+0.012}_{-0.011}$
$\ln(10^{10} A_s)$	3.060	$3.075^{+0.065}_{-0.062}$	$\sigma_8/h^{0.5}$	0.9924	$0.984^{+0.029}_{-0.030}$	$100\theta_{s,eq}$	0.4528	$0.4540^{+0.0062}_{-0.0058}$
$n_s$	0.9684	$0.9690^{+0.0096}_{-0.0089}$	$\langle d^2 \rangle^{1/2}$	2.445	$2.449^{+0.051}_{-0.051}$	$r_{drag}/D_V(0.57)$	0.07192	$0.07175^{+0.00088}_{-0.00091}$
$y_{cal}$	1.00020	$1.0002^{+0.0049}_{-0.0047}$	$z_{re}$	8.69	$9.4^{+3.0}_{-3.0}$	$H(0.57)$	93.18	$92.96^{+0.73}_{-0.75}$
$A_{217}^{CIB}$	67.7	$64^{+10}_{-10}$	$10^9 A_s$	2.133	$2.17^{+0.14}_{-0.13}$	$D_A(0.57)$	1382.5	$1387^{+19}_{-19}$
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8742	$1.872^{+0.022}_{-0.022}$	$F_{AP}(0.57)$	0.67459	$0.6754^{+0.0043}_{-0.0039}$
$A_{143}^{tSZ}$	7.20	$5.1^{+3.7}_{-3.9}$	$D_{40}$	1224.2	$1226^{+23}_{-22}$	$f\sigma_8(0.57)$	0.4742	$0.471^{+0.012}_{-0.013}$
$A_{100}^{PS}$	254	$259^{+60}_{-50}$	$D_{220}$	5716	$5720^{+78}_{-76}$	$\sigma_8(0.57)$	0.6100	$0.603^{+0.021}_{-0.023}$
$A_{143}^{PS}$	38.7	$44^{+20}_{-20}$	$D_{810}$	2533.1	$2532^{+26}_{-26}$	$f_{2000}^{143}$	29.8	$30^{+5}_{-5}$
$A_{143 \times 217}^{PS}$	32	$38^{+20}_{-20}$	$D_{1420}$	815.3	$815.0^{+9.6}_{-9.7}$	$f_{2000}^{143 \times 217}$	32.41	$33^{+4}_{-4}$
$A_{217}^{PS}$	96.2	$96^{+20}_{-20}$	$D_{2000}$	230.39	$230.2^{+3.4}_{-3.4}$	$f_{2000}^{217}$	105.94	$106.1^{+3.8}_{-3.8}$
$A^{kSZ}$	0.1	—	$n_{s,0.002}$	0.9684	$0.9690^{+0.0096}_{-0.0089}$	$\chi^2_{lensing}$	9.42	$9.8 (\nu: 1.1)$
$A_{100}^{dustTT}$	7.52	$7.5^{+3.6}_{-3.7}$	$Y_P$	0.245358	$0.24535^{+0.00018}_{-0.00018}$	$\chi^2_{lowTEB}$	10494.80	$10495.7 (\nu: 1.0)$
$A_{143}^{dustTT}$	9.15	$9.1^{+3.6}_{-3.7}$	$Y_P^{BBN}$	0.246684	$0.24668^{+0.00018}_{-0.00018}$	$\chi^2_{plik}$	766.2	$779.5 (\nu: 15.1)$
$A_{143 \times 217}^{dustTT}$	17.7	$17.2^{+8.0}_{-8.1}$	$10^5 D/H$	2.606	$2.607^{+0.075}_{-0.074}$	$\chi^2_{H070p6}$	0.62	$0.82 (\nu: 0.1)$
$A_{217}^{dustTT}$	81.9	$82^{+10}_{-10}$	Age/Gyr	13.786	$13.813^{+0.084}_{-0.080}$	$\chi^2_{6DF}$	0.001	$0.059 (\nu: 0.0)$
$c_{100}$	0.99790	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1089.89	$1089.86^{+0.62}_{-0.61}$	$\chi^2_{MGS}$	1.61	$1.46 (\nu: 0.2)$
$c_{217}$	0.99600	$0.9960^{+0.0029}_{-0.0028}$	$r_*$	144.87	$145.00^{+0.65}_{-0.63}$	$\chi^2_{DR11CMAS}$	2.43	$2.91 (\nu: 0.3)$
$H_0$	67.99	$67.7^{+1.3}_{-1.4}$	$100\theta_*$	1.04123	$1.04129^{+0.00078}_{-0.00081}$	$\chi^2_{DR11LOWZ}$	0.32	$0.66 (\nu: 0.2)$
$\Omega_\Lambda$	0.6941	$0.691^{+0.015}_{-0.017}$	$D_A/\text{Gpc}$	13.914	$13.925^{+0.063}_{-0.061}$	$\chi^2_{prior}$	2.2	$7.3 (\nu: 6.4)$
$\Omega_m$	0.3059	$0.309^{+0.017}_{-0.015}$	$z_{drag}$	1059.63	$1059.60^{+0.86}_{-0.83}$	$\chi^2_{CMB}$	11270.5	$11285.0 (\nu: 15.2)$
$\Omega_m h^2$	0.14139	$0.1415^{+0.0023}_{-0.0023}$	$r_{drag}$	147.57	$147.70^{+0.69}_{-0.67}$	$\chi^2_{BAO}$	4.36	$5.1 (\nu: 0.6)$

Best-fit  $\chi^2_{eff} = 11277.62$ ;  $\bar{\chi}^2_{eff} = 11298.19$ ;  $R - 1 = 0.00655$

$\chi^2_{eff}$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMAS: 2.43 DR11LOWZ: 0.32 CMB - smica\_g30\_ftl\_full\_pp: 9.42 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.80 plik\_dx11dr2\_HM\_v18\_TT: 766.24 Hubble - H070p6: 0.62

### 7.53 base\_mnu\_plikHM\_TT\_lowTEB\_lensing\_BAO\_post\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022266	$0.02229^{+0.00039}_{-0.00039}$	$\Omega_m h^3$	0.09607	$0.0958^{+0.0012}_{-0.0012}$	$z_{\text{eq}}$	3364	$3352^{+59}_{-61}$
$\Omega_c h^2$	0.11852	$0.1180^{+0.0026}_{-0.0027}$	$\sigma_8$	0.8181	$0.810^{+0.026}_{-0.028}$	$k_{\text{eq}}$	0.010268	$0.01023^{+0.00018}_{-0.00019}$
$100\theta_{\text{MC}}$	1.04103	$1.04108^{+0.00079}_{-0.00081}$	$\sigma_8 \Omega_m^{0.5}$	0.4525	$0.450^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	0.8199	$0.822^{+0.012}_{-0.011}$
$\tau$	0.0649	$0.073^{+0.034}_{-0.033}$	$\sigma_8 \Omega_m^{0.25}$	0.6084	$0.604^{+0.017}_{-0.019}$	$100\theta_{\text{s,eq}}$	0.4529	$0.4542^{+0.0061}_{-0.0057}$
$\Sigma m_\nu$ [eV]	0.051	$< 0.234$	$\sigma_8/h^{0.5}$	0.9923	$0.985^{+0.027}_{-0.030}$	$r_{\text{drag}}/D_V(0.57)$	0.07192	$0.07180^{+0.00086}_{-0.00088}$
$\ln(10^{10} A_s)$	3.060	$3.075^{+0.064}_{-0.061}$	$\langle d^2 \rangle^{1/2}$	2.445	$2.448^{+0.051}_{-0.051}$	$H(0.57)$	93.16	$92.99^{+0.71}_{-0.72}$
$n_s$	0.9683	$0.9691^{+0.0096}_{-0.0089}$	$z_{\text{re}}$	8.72	$9.4^{+3.0}_{-3.0}$	$D_A(0.57)$	1382.8	$1387^{+19}_{-17}$
$y_{\text{cal}}$	0.99996	$1.0002^{+0.0048}_{-0.0047}$	$10^9 A_s$	2.133	$2.17^{+0.14}_{-0.13}$	$F_{\text{AP}}(0.57)$	0.67459	$0.6752^{+0.0041}_{-0.0039}$
$A_{217}^{\text{CIB}}$	67.4	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8732	$1.872^{+0.022}_{-0.022}$	$f\sigma_8(0.57)$	0.4741	$0.471^{+0.012}_{-0.013}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1223.9	$1226^{+23}_{-22}$	$\sigma_8(0.57)$	0.6099	$0.604^{+0.021}_{-0.022}$
$A_{143}^{\text{tSZ}}$	7.25	$5.1^{+3.7}_{-3.9}$	$D_{220}$	5712	$5720^{+78}_{-76}$	$f_{2000}^{143}$	29.9	$30^{+5}_{-5}$
$A_{100}^{\text{PS}}$	254	$259^{+60}_{-50}$	$D_{810}$	2531.5	$2532^{+26}_{-26}$	$f_{2000}^{143 \times 217}$	32.54	$33^{+4}_{-4}$
$A_{143}^{\text{PS}}$	39.0	$44^{+20}_{-20}$	$D_{1420}$	814.6	$815.0^{+9.6}_{-9.7}$	$f_{2000}^{217}$	106.05	$106.1^{+3.8}_{-3.7}$
$A_{143 \times 217}^{\text{PS}}$	33	$38^{+20}_{-20}$	$D_{2000}$	230.13	$230.3^{+3.4}_{-3.4}$	$\chi^2_{\text{lensing}}$	9.39	$9.8 (\nu: 1.1)$
$A_{217}^{\text{PS}}$	97.0	$96^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9683	$0.9691^{+0.0096}_{-0.0089}$	$\chi^2_{\text{lowTEB}}$	10494.83	$10495.7 (\nu: 1.0)$
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.245347	$0.24536^{+0.00018}_{-0.00018}$	$\chi^2_{\text{plik}}$	766.3	$779.5 (\nu: 15.1)$
$A_{100}^{\text{dustTT}}$	7.42	$7.5^{+3.6}_{-3.7}$	$Y_{\text{P}}^{\text{BBN}}$	0.246673	$0.24668^{+0.00018}_{-0.00018}$	$\chi^2_{\text{H070p6}}$	0.63	$0.78 (\nu: 0.1)$
$A_{143}^{\text{dustTT}}$	9.15	$9.1^{+3.6}_{-3.7}$	$10^5 \text{D}/\text{H}$	2.611	$2.606^{+0.074}_{-0.074}$	$\chi^2_{\text{JLA}}$	706.610	$706.72 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.0}_{-8.1}$	$\text{Age}/\text{Gyr}$	13.789	$13.810^{+0.081}_{-0.078}$	$\chi^2_{6\text{DF}}$	0.001	$0.052 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$z_*$	1089.92	$1089.84^{+0.61}_{-0.61}$	$\chi^2_{\text{MGS}}$	1.61	$1.52 (\nu: 0.2)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.90	$145.01^{+0.65}_{-0.62}$	$\chi^2_{\text{DR11CMass}}$	2.43	$2.88 (\nu: 0.2)$
$c_{217}$	0.99594	$0.9960^{+0.0029}_{-0.0028}$	$100\theta_*$	1.04122	$1.04130^{+0.00078}_{-0.00081}$	$\chi^2_{\text{DR11LOWZ}}$	0.32	$0.60 (\nu: 0.2)$
$H_0$	67.97	$67.7^{+1.2}_{-1.3}$	$D_A/\text{Gpc}$	13.916	$13.926^{+0.063}_{-0.060}$	$\chi^2_{\text{prior}}$	2.1	$7.3 (\nu: 6.4)$
$\Omega_\Lambda$	0.6941	$0.692^{+0.015}_{-0.016}$	$z_{\text{drag}}$	1059.59	$1059.61^{+0.85}_{-0.84}$	$\chi^2_{\text{CMB}}$	11270.5	$11285.0 (\nu: 15.2)$
$\Omega_m$	0.3059	$0.308^{+0.016}_{-0.015}$	$r_{\text{drag}}$	147.61	$147.71^{+0.69}_{-0.66}$	$\chi^2_{\text{BAO}}$	4.36	$5.0 (\nu: 0.5)$
$\Omega_m h^2$	0.14134	$0.1414^{+0.0023}_{-0.0022}$	$k_{\text{D}}$	0.14024	$0.14016^{+0.00081}_{-0.00085}$			
$\Omega_\nu h^2$	0.00055	$< 0.00251$	$100\theta_{\text{D}}$	0.160971	$0.16096^{+0.00050}_{-0.00049}$			

Best-fit  $\chi^2_{\text{eff}} = 11984.21$ ;  $\bar{\chi}^2_{\text{eff}} = 12004.81$ ;  $R - 1 = 0.00684$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMass: 2.43 DR11LOWZ: 0.32 CMB - smica\_g30\_ftl\_full\_pp: 9.39 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.83 plik\_dx11dr2\_HM\_v18\_TT: 766.31 Hubble - H070p6: 0.63 SN - JLA December\_2013: 706.61



## 7.54 base\_mnu\_plikHM\_TTTEEE\_lowTEB\_lensing\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022284	$0.02229^{+0.00028}_{-0.00028}$	$A_{143 \times 217}^{\text{dust}TE}$	0.336	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04108	$1.04110^{+0.00059}_{-0.00058}$
$\Omega_c h^2$	0.11900	$0.1188^{+0.0022}_{-0.0022}$	$A_{217}^{\text{dust}TE}$	1.66	$1.66^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	13.9048	$13.908^{+0.048}_{-0.047}$
$100\theta_{\text{MC}}$	1.04089	$1.04089^{+0.00060}_{-0.00058}$	$c_{100}$	0.99817	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.67	$1059.67^{+0.61}_{-0.58}$
$\tau$	0.0625	$0.067^{+0.031}_{-0.028}$	$c_{217}$	0.99598	$0.9960^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.46	$147.49^{+0.51}_{-0.50}$
$\Sigma m_\nu [\text{eV}]$	0.047	$< 0.215$	$H_0$	67.81	$67.5^{+1.2}_{-1.3}$	$k_D$	0.14041	$0.14038^{+0.00059}_{-0.00057}$
$\ln(10^{10} A_s)$	3.057	$3.066^{+0.058}_{-0.052}$	$\Omega_\Lambda$	0.6916	$0.688^{+0.014}_{-0.017}$	$100\theta_D$	0.160910	$0.16090^{+0.00034}_{-0.00035}$
$n_s$	0.9664	$0.9665^{+0.0084}_{-0.0080}$	$\Omega_m$	0.3084	$0.312^{+0.017}_{-0.014}$	$z_{\text{eq}}$	3376	$3372^{+50}_{-50}$
$y_{\text{cal}}$	0.99987	$1.0003^{+0.0048}_{-0.0047}$	$\Omega_m h^2$	0.14179	$0.1421^{+0.0021}_{-0.0020}$	$k_{\text{eq}}$	0.010305	$0.01029^{+0.00015}_{-0.00015}$
$A_{217}^{\text{CIB}}$	67.4	$65^{+10}_{-10}$	$\Omega_\nu h^2$	0.00050	$< 0.00231$	$100\theta_{\text{eq}}$	0.8177	$0.8186^{+0.0097}_{-0.0094}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.08	—	$\Omega_m h^3$	0.09614	$0.09586^{+0.00091}_{-0.0010}$	$100\theta_{s,\text{eq}}$	0.45172	$0.4522^{+0.0050}_{-0.0048}$
$A_{143}^{\text{tSZ}}$	7.28	$5.3^{+3.7}_{-3.8}$	$\sigma_8$	0.8188	$0.811^{+0.024}_{-0.026}$	$r_{\text{drag}}/D_V(0.57)$	0.07176	$0.07156^{+0.00080}_{-0.00087}$
$A_{100}^{\text{PS}}$	256	$261^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4547	$0.453^{+0.012}_{-0.012}$	$H(0.57)$	93.11	$92.91^{+0.64}_{-0.68}$
$A_{143}^{\text{PS}}$	39.7	$43^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6102	$0.606^{+0.016}_{-0.016}$	$D_A(0.57)$	1384.8	$1390^{+18}_{-17}$
$A_{143 \times 217}^{\text{PS}}$	34.9	$39^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9943	$0.987^{+0.026}_{-0.027}$	$F_{\text{AP}}(0.57)$	0.67523	$0.6762^{+0.0041}_{-0.0037}$
$A_{217}^{\text{PS}}$	97.3	$97^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4511	$2.453^{+0.047}_{-0.048}$	$f\sigma_8(0.57)$	0.4751	$0.472^{+0.011}_{-0.012}$
$A^{\text{kSZ}}$	0.01	$< 8.30$	$z_{\text{re}}$	8.50	$8.9^{+2.8}_{-2.8}$	$\sigma_8(0.57)$	0.6098	$0.603^{+0.019}_{-0.021}$
$A_{100}^{\text{dust}TT}$	7.44	$7.5^{+3.7}_{-3.7}$	$10^9 A_s$	2.126	$2.15^{+0.12}_{-0.12}$	$f_{2000}^{143}$	29.6	$30^{+5}_{-5}$
$A_{143}^{\text{dust}TT}$	9.07	$9.1^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8765	$1.877^{+0.021}_{-0.021}$	$f_{2000}^{143 \times 217}$	32.43	$33^{+4}_{-4}$
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.2^{+8.2}_{-8.2}$	$D_{40}$	1228.6	$1231^{+22}_{-21}$	$f_{2000}^{217}$	105.90	$106.1^{+3.5}_{-3.6}$
$A_{217}^{\text{dust}TT}$	81.3	$82^{+10}_{-10}$	$D_{220}$	5722	$5728^{+75}_{-75}$	$\chi_{\text{lensing}}^2$	9.99	$10.2 (\nu: 1.4)$
$A_{100}^{\text{dust}EE}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{810}$	2533.1	$2534^{+26}_{-26}$	$\chi_{\text{lowTEB}}^2$	10495.22	$10495.8 (\nu: 0.7)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0492	$0.0492^{+0.0097}_{-0.0099}$	$D_{1420}$	814.7	$815.1^{+9.3}_{-9.0}$	$\chi_{\text{plik}}^2$	2435.2	$2453.7 (\nu: 22.8)$
$A_{100 \times 217}^{\text{dust}EE}$	0.100	$0.0997^{+0.064}_{-0.065}$	$D_{2000}$	230.14	$230.2^{+3.0}_{-2.9}$	$\chi_{6\text{DF}}^2$	0.010	$0.08 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1002	$0.100^{+0.013}_{-0.014}$	$n_{s,0.002}$	0.9664	$0.9665^{+0.0084}_{-0.0080}$	$\chi_{\text{MGS}}^2$	1.41	$1.22 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.224^{+0.090}_{-0.092}$	$Y_P$	0.245355	$0.24536^{+0.00012}_{-0.00013}$	$\chi_{\text{DR11CMass}}^2$	2.41	$3.00 (\nu: 0.4)$
$A_{217}^{\text{dust}EE}$	0.656	$0.65^{+0.26}_{-0.25}$	$Y_P^{\text{BBN}}$	0.246681	$0.24668^{+0.00012}_{-0.00013}$	$\chi_{\text{DR11LOWZ}}^2$	0.48	$0.90 (\nu: 0.2)$
$A_{100}^{\text{dust}TE}$	0.140	$0.141^{+0.074}_{-0.075}$	$10^5 D/H$	2.608	$2.606^{+0.053}_{-0.053}$	$\chi_{\text{prior}}^2$	7.0	$19.5 (\nu: 15.2)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.058}_{-0.057}$	$\text{Age/Gyr}$	13.791	$13.814^{+0.074}_{-0.068}$	$\chi_{\text{CMB}}^2$	12940.4	$12959.8 (\nu: 21.7)$
$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.16}_{-0.17}$	$z_*$	1089.937	$1089.92^{+0.48}_{-0.47}$	$\chi_{\text{BAO}}^2$	4.31	$5.2 (\nu: 0.8)$
$A_{143}^{\text{dust}TE}$	0.155	$0.15^{+0.11}_{-0.11}$	$r_*$	144.76	$144.80^{+0.50}_{-0.50}$			

Best-fit  $\chi_{\text{eff}}^2 = 12951.71$ ;  $\bar{\chi}_{\text{eff}}^2 = 12984.47$ ;  $R - 1 = 0.01052$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.41 DR11LOWZ: 0.48 CMB - smica\_g30\_ftl\_full\_pp: 9.99 lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.22 plik\_dx11dr2\_HM\_v18\_TTT

## 7.55 base\_mnu\_plikHM\_TTTEEE\_lowTEB\_lensing\_BAO\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022290	$0.02230^{+0.00028}_{-0.00028}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04110	$1.04112^{+0.00060}_{-0.00059}$
$\Omega_c h^2$	0.11897	$0.1187^{+0.0022}_{-0.0022}$	$A_{217}^{\text{dust}TE}$	1.67	$1.66^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	13.9052	$13.909^{+0.048}_{-0.047}$
$100\theta_{\text{MC}}$	1.04092	$1.04091^{+0.00060}_{-0.00059}$	$c_{100}$	0.99813	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.67	$1059.69^{+0.59}_{-0.58}$
$\tau$	0.0611	$0.067^{+0.030}_{-0.027}$	$c_{217}$	0.99605	$0.9960^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.46	$147.51^{+0.50}_{-0.51}$
$\Sigma m_\nu [\text{eV}]$	0.022	$< 0.201$	$H_0$	68.04	$67.6^{+1.2}_{-1.2}$	$k_D$	0.14041	$0.14038^{+0.00059}_{-0.00057}$
$\ln(10^{10} A_s)$	3.054	$3.066^{+0.056}_{-0.051}$	$\Omega_\Lambda$	0.6944	$0.689^{+0.015}_{-0.016}$	$100\theta_D$	0.160905	$0.16090^{+0.00034}_{-0.00035}$
$n_s$	0.9663	$0.9668^{+0.0084}_{-0.0081}$	$\Omega_m$	0.3056	$0.311^{+0.016}_{-0.015}$	$z_{\text{eq}}$	3375.6	$3370^{+49}_{-50}$
$y_{\text{cal}}$	1.00000	$1.0002^{+0.0048}_{-0.0047}$	$\Omega_m h^2$	0.14149	$0.1419^{+0.0021}_{-0.0020}$	$k_{\text{eq}}$	0.010302	$0.01029^{+0.00015}_{-0.00015}$
$A_{217}^{\text{CIB}}$	67.8	$64^{+10}_{-10}$	$\Omega_\nu h^2$	0.00023	$< 0.00216$	$100\theta_{\text{eq}}$	0.8178	$0.8189^{+0.0096}_{-0.0093}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m h^3$	0.09627	$0.09591^{+0.00089}_{-0.00096}$	$100\theta_{\text{s,eq}}$	0.45180	$0.4524^{+0.0049}_{-0.0047}$
$A_{143}^{\text{tSZ}}$	7.35	$5.3^{+3.7}_{-3.8}$	$\sigma_8$	0.8224	$0.812^{+0.023}_{-0.025}$	$r_{\text{drag}}/D_V(0.57)$	0.07191	$0.07163^{+0.00078}_{-0.00084}$
$A_{100}^{\text{PS}}$	257	$261^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4547	$0.453^{+0.012}_{-0.012}$	$H(0.57)$	93.23	$92.96^{+0.61}_{-0.65}$
$A_{143}^{\text{PS}}$	38.5	$43^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6115	$0.607^{+0.016}_{-0.016}$	$D_A(0.57)$	1381.6	$1388^{+17}_{-17}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9970	$0.988^{+0.025}_{-0.026}$	$F_{\text{AP}}(0.57)$	0.67453	$0.6759^{+0.0039}_{-0.0038}$
$A_{217}^{\text{PS}}$	96.4	$97^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4516	$2.453^{+0.047}_{-0.048}$	$f\sigma_8(0.57)$	0.4760	$0.473^{+0.011}_{-0.011}$
$A^{\text{kSZ}}$	0.00	$< 8.30$	$z_{\text{re}}$	8.35	$8.9^{+2.7}_{-2.7}$	$\sigma_8(0.57)$	0.6130	$0.605^{+0.019}_{-0.020}$
$A_{100}^{\text{dust}TT}$	7.43	$7.5^{+3.6}_{-3.7}$	$10^9 A_s$	2.120	$2.15^{+0.12}_{-0.12}$	$f_{2000}^{143}$	29.8	$30^{+5}_{-5}$
$A_{143}^{\text{dust}TT}$	9.08	$9.1^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8765	$1.876^{+0.021}_{-0.021}$	$f_{2000}^{143 \times 217}$	32.55	$32^{+4}_{-4}$
$A_{143 \times 217}^{\text{dust}TT}$	17.7	$17.2^{+8.2}_{-8.1}$	$D_{40}$	1228.7	$1231^{+22}_{-21}$	$f_{2000}^{217}$	106.06	$106.1^{+3.6}_{-3.6}$
$A_{217}^{\text{dust}TT}$	81.9	$82^{+10}_{-10}$	$D_{220}$	5724	$5729^{+74}_{-74}$	$\chi^2_{\text{lensing}}$	10.07	$10.2 (\nu: 1.4)$
$A_{100}^{\text{dust}EE}$	0.0813	$0.082^{+0.011}_{-0.011}$	$D_{810}$	2533.1	$2534^{+26}_{-25}$	$\chi^2_{\text{lowTEB}}$	10495.25	$10495.8 (\nu: 0.7)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0490	$0.0493^{+0.0097}_{-0.0099}$	$D_{1420}$	814.6	$815.1^{+9.3}_{-8.9}$	$\chi^2_{\text{plik}}$	2435.0	$2453.8 (\nu: 23.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.0997	$0.100^{+0.065}_{-0.065}$	$D_{2000}$	230.11	$230.2^{+3.0}_{-3.0}$	$\chi^2_{\text{H070p6}}$	0.60	$0.86 (\nu: 0.1)$
$A_{143}^{\text{dust}EE}$	0.1005	$0.101^{+0.014}_{-0.014}$	$n_{\text{s},0.002}$	0.9663	$0.9668^{+0.0084}_{-0.0081}$	$\chi^2_{\text{6DF}}$	0.001	$0.066 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.224^{+0.091}_{-0.093}$	$Y_{\text{P}}$	0.245358	$0.24536^{+0.00012}_{-0.00013}$	$\chi^2_{\text{MGS}}$	1.61	$1.30 (\nu: 0.1)$
$A_{217}^{\text{dust}EE}$	0.654	$0.65^{+0.26}_{-0.25}$	$Y_{\text{P}}^{\text{BBN}}$	0.246684	$0.24669^{+0.00012}_{-0.00013}$	$\chi^2_{\text{DR11CMass}}$	2.44	$2.90 (\nu: 0.3)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.073}_{-0.073}$	$10^5 \text{D}/\text{H}$	2.606	$2.604^{+0.052}_{-0.052}$	$\chi^2_{\text{DR11LOWZ}}$	0.32	$0.79 (\nu: 0.2)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.058}_{-0.056}$	$\text{Age}/\text{Gyr}$	13.779	$13.808^{+0.071}_{-0.065}$	$\chi^2_{\text{prior}}$	7.1	$19.5 (\nu: 15.0)$
$A_{100 \times 217}^{\text{dust}TE}$	0.305	$0.30^{+0.16}_{-0.16}$	$z_*$	1089.925	$1089.89^{+0.47}_{-0.46}$	$\chi^2_{\text{CMB}}$	12940.3	$12959.8 (\nu: 21.8)$
$A_{143}^{\text{dust}TE}$	0.155	$0.15^{+0.11}_{-0.11}$	$r_*$	144.77	$144.81^{+0.50}_{-0.50}$	$\chi^2_{\text{BAO}}$	4.37	$5.1 (\nu: 0.6)$

Best-fit  $\chi^2_{\text{eff}} = 12952.35$ ;  $\bar{\chi}^2_{\text{eff}} = 12985.21$ ;  $R - 1 = 0.01385$   
 $\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMASS: 2.44 DR11LOWZ: 0.32 CMB - smica\_g30\_ftl\_full\_pp: 10.07 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.25  
plik\_dx11dr2\_HM\_v18\_TTTEEE: 2434.95 Hubble - H070p6: 0.60

## 7.56 base\_mnu\_plikHM\_TTTEEE\_lowTEB\_lensing\_BAO\_post\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022280	$0.02231^{+0.00027}_{-0.00027}$	$A_{217}^{\text{dustTE}}$	1.66	$1.66^{+0.50}_{-0.50}$	$z_{\text{drag}}$	1059.67	$1059.69^{+0.58}_{-0.56}$
$\Omega_c h^2$	0.11908	$0.1187^{+0.0021}_{-0.0022}$	$c_{100}$	0.99815	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.44	$147.52^{+0.50}_{-0.50}$
$100\theta_{\text{MC}}$	1.04089	$1.04092^{+0.00060}_{-0.00058}$	$c_{217}$	0.99611	$0.9960^{+0.0028}_{-0.0028}$	$k_{\text{D}}$	0.14042	$0.14037^{+0.00059}_{-0.00057}$
$\tau$	0.0603	$0.067^{+0.030}_{-0.027}$	$H_0$	67.97	$67.6^{+1.2}_{-1.2}$	$100\theta_{\text{D}}$	0.160911	$0.16089^{+0.00034}_{-0.00034}$
$\Sigma m_\nu$ [eV]	0.023	< 0.194	$\Omega_\Lambda$	0.6935	$0.690^{+0.015}_{-0.015}$	$z_{\text{eq}}$	3378.1	$3369^{+49}_{-49}$
$\ln(10^{10} A_s)$	3.053	$3.066^{+0.056}_{-0.051}$	$\Omega_m$	0.3065	$0.310^{+0.015}_{-0.015}$	$k_{\text{eq}}$	0.010310	$0.01028^{+0.00015}_{-0.00015}$
$n_s$	0.9658	$0.9669^{+0.0084}_{-0.0081}$	$\Omega_m h^2$	0.14160	$0.1418^{+0.0020}_{-0.0019}$	$100\theta_{\text{eq}}$	0.8173	$0.8192^{+0.0096}_{-0.0091}$
$y_{\text{cal}}$	1.00002	$1.0002^{+0.0048}_{-0.0047}$	$\Omega_\nu h^2$	0.00024	< 0.00208	$100\theta_{s,\text{eq}}$	0.45154	$0.4525^{+0.0049}_{-0.0047}$
$A_{217}^{\text{CIB}}$	68.3	$64^{+10}_{-10}$	$\Omega_m h^3$	0.09625	$0.09594^{+0.00087}_{-0.00093}$	$r_{\text{drag}}/D_V(0.57)$	0.07186	$0.07167^{+0.00077}_{-0.00082}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\sigma_8$	0.8220	$0.813^{+0.023}_{-0.024}$	$H(0.57)$	93.20	$92.99^{+0.59}_{-0.63}$
$A_{143}^{\text{tSZ}}$	7.35	$5.3^{+3.7}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	0.4551	$0.453^{+0.012}_{-0.012}$	$D_A(0.57)$	1382.5	$1387^{+17}_{-16}$
$A_{100}^{\text{PS}}$	258	$261^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6116	$0.607^{+0.015}_{-0.016}$	$F_{\text{AP}}(0.57)$	0.67474	$0.6757^{+0.0038}_{-0.0035}$
$A_{143}^{\text{PS}}$	38.8	$43^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9970	$0.989^{+0.025}_{-0.026}$	$f\sigma_8(0.57)$	0.4760	$0.473^{+0.011}_{-0.011}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4521	$2.452^{+0.047}_{-0.048}$	$\sigma_8(0.57)$	0.6125	$0.605^{+0.018}_{-0.020}$
$A_{217}^{\text{PS}}$	96.0	$97^{+20}_{-20}$	$z_{\text{re}}$	8.28	$8.9^{+2.7}_{-2.7}$	$f_{2000}^{143}$	30.0	$30^{+5}_{-5}$
$A^{\text{kSZ}}$	0.00	< 8.30	$10^9 A_s$	2.118	$2.15^{+0.12}_{-0.11}$	$f_{2000}^{143 \times 217}$	32.70	$32^{+4}_{-4}$
$A_{100}^{\text{dustTT}}$	7.51	$7.5^{+3.6}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8771	$1.876^{+0.021}_{-0.021}$	$f_{2000}^{217}$	106.15	$106.0^{+3.6}_{-3.6}$
$A_{143}^{\text{dustTT}}$	9.12	$9.1^{+3.6}_{-3.6}$	$D_{40}$	1229.5	$1230^{+22}_{-21}$	$\chi^2_{\text{lensing}}$	10.12	10.2 ( $\nu$ : 1.5)
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.1^{+8.2}_{-8.2}$	$D_{220}$	5725	$5729^{+74}_{-74}$	$\chi^2_{\text{lowTEB}}$	10495.33	10495.8 ( $\nu$ : 0.7)
$A_{217}^{\text{dustTT}}$	81.7	$82^{+10}_{-10}$	$D_{810}$	2533.2	$2534^{+26}_{-25}$	$\chi^2_{\text{plik}}$	2434.7	2453.8 ( $\nu$ : 23.0)
$A_{100}^{\text{dustEE}}$	0.0813	$0.082^{+0.011}_{-0.011}$	$D_{1420}$	814.5	$815.1^{+9.3}_{-8.9}$	$\chi^2_{\text{H070p6}}$	0.63	0.82 ( $\nu$ : 0.1)
$A_{100 \times 143}^{\text{dustEE}}$	0.0490	$0.0493^{+0.0097}_{-0.0099}$	$D_{2000}$	230.03	$230.3^{+3.0}_{-2.9}$	$\chi^2_{\text{JLA}}$	706.622	706.75 ( $\nu$ : 0.0)
$A_{100 \times 217}^{\text{dustEE}}$	0.100	$0.100^{+0.065}_{-0.065}$	$n_{s,0.002}$	0.9658	$0.9669^{+0.0084}_{-0.0081}$	$\chi^2_{6\text{DF}}$	0.003	0.057 ( $\nu$ : 0.0)
$A_{143}^{\text{dustEE}}$	0.1004	$0.101^{+0.014}_{-0.014}$	$Y_{\text{P}}$	0.245353	$0.24536^{+0.00012}_{-0.00013}$	$\chi^2_{\text{MGS}}$	1.54	1.36 ( $\nu$ : 0.1)
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.224^{+0.091}_{-0.093}$	$Y_{\text{P}}^{\text{BBN}}$	0.246679	$0.24669^{+0.00012}_{-0.00013}$	$\chi^2_{\text{DR11CMass}}$	2.42	2.84 ( $\nu$ : 0.2)
$A_{217}^{\text{dustEE}}$	0.648	$0.65^{+0.26}_{-0.25}$	$10^5 \text{D}/\text{H}$	2.608	$2.603^{+0.052}_{-0.051}$	$\chi^2_{\text{DR11LOWZ}}$	0.37	0.72 ( $\nu$ : 0.2)
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.073}_{-0.073}$	Age/Gyr	13.781	$13.805^{+0.068}_{-0.063}$	$\chi^2_{\text{prior}}$	7.2	19.5 ( $\nu$ : 15.0)
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.132^{+0.058}_{-0.056}$	$z_*$	1089.949	$1089.88^{+0.47}_{-0.45}$	$\chi^2_{\text{CMB}}$	12940.2	12959.8 ( $\nu$ : 21.8)
$A_{100 \times 217}^{\text{dustTE}}$	0.304	$0.30^{+0.16}_{-0.17}$	$r_*$	144.745	$144.83^{+0.49}_{-0.49}$	$\chi^2_{\text{BAO}}$	4.33	4.98 ( $\nu$ : 0.5)
$A_{143}^{\text{dustTE}}$	0.154	$0.15^{+0.11}_{-0.11}$	$100\theta_*$	1.04106	$1.04112^{+0.00060}_{-0.00058}$			
$A_{143 \times 217}^{\text{dustTE}}$	0.340	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.9035	$13.911^{+0.048}_{-0.046}$			

Best-fit  $\chi^2_{\text{eff}} = 13658.96$ ;  $\bar{\chi}^2_{\text{eff}} = 13691.86$ ;  $R - 1 = 0.01490$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.54 DR11CMass: 2.42 DR11LOWZ: 0.37 CMB - smica\_g30\_ftl\_full\_pp: 10.12 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.33  
plik\_dx11dr2\_HM\_v18\_TTTEEE: 2434.72 Hubble - H070p6: 0.63 SN - JLA December\_2013: 706.62

## 7.57 base\_mnu\_CamSpecHM\_TT\_lowTEB\_lensing\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022227	$0.02228^{+0.00039}_{-0.00039}$ (+0.0 $\sigma$ )	$\Omega_m$	0.3087	$0.310^{+0.017}_{-0.017}$ (-0.0 $\sigma$ )	$100\theta_D$	0.161006	$0.16095^{+0.00050}_{-0.00048}$ (-0.1 $\sigma$ )
$\Omega_c h^2$	0.11866	$0.1181^{+0.0027}_{-0.0029}$ (-0.0 $\sigma$ )	$\Omega_m h^2$	0.14163	$0.1416^{+0.0023}_{-0.0024}$ (-0.0 $\sigma$ )	$z_{\text{eq}}$	3367	$3355^{+61}_{-66}$ (-0.0 $\sigma$ )
$100\theta_{\text{MC}}$	1.04105	$1.04106^{+0.00082}_{-0.00083}$ (+0.0 $\sigma$ )	$\Omega_\nu h^2$	0.00075	< 0.00268 (-0.0 $\sigma$ )	$100\theta_{\text{eq}}$	0.8194	$0.822^{+0.013}_{-0.011}$ (+0.0 $\sigma$ )
$\tau$	0.0670	$0.075^{+0.034}_{-0.034}$ (+0.1 $\sigma$ )	$\Omega_m h^3$	0.09594	$0.0957^{+0.0012}_{-0.0013}$ (+0.0 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07177	$0.07169^{+0.00094}_{-0.00091}$ (+0.0 $\sigma$ )
$\Sigma m_\nu [\text{eV}]$	0.069	< 0.249 (-0.0 $\sigma$ )	$\sigma_8$	0.8158	$0.810^{+0.027}_{-0.029}$ (+0.1 $\sigma$ )	$H(0.57)$	93.03	$92.91^{+0.70}_{-0.77}$ (+0.0 $\sigma$ )
$\ln(10^{10} A_s)$	3.062	$3.077^{+0.064}_{-0.063}$ (+0.1 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4533	$0.451^{+0.014}_{-0.015}$ (+0.1 $\sigma$ )	$D_A(0.57)$	1386.1	$1389^{+19}_{-18}$ (-0.0 $\sigma$ )
$n_s$	0.9682	$0.9706^{+0.0097}_{-0.0093}$ (+0.4 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6081	$0.604^{+0.017}_{-0.019}$ (+0.1 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.67531	$0.6757^{+0.0043}_{-0.0043}$ (-0.0 $\sigma$ )
$y_{\text{cal}}$	0.99994	$1.0001^{+0.0048}_{-0.0049}$ (-0.1 $\sigma$ )	$\sigma_8/h^{0.5}$	0.9912	$0.985^{+0.029}_{-0.031}$ (+0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4739	$0.471^{+0.012}_{-0.014}$ (+0.1 $\sigma$ )
$A_{100}^{\text{PS}}$	252.3	$246^{+40}_{-40}$ (-0.5 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.446	$2.447^{+0.051}_{-0.051}$ (-0.1 $\sigma$ )	$\sigma_8(0.57)$	0.6077	$0.603^{+0.022}_{-0.023}$ (+0.1 $\sigma$ )
$A_{143}^{\text{PS}}$	35.4	$39^{+10}_{-10}$ (-0.6 $\sigma$ )	$z_{\text{re}}$	8.94	$9.6^{+3.0}_{-3.0}$ (+0.1 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246240	$0.24626^{+0.00017}_{-0.00017}$ (-4.4 $\sigma$ )
$A_{217}^{\text{PS}}$	94.1	$97^{+30}_{-30}$ (+0.1 $\sigma$ )	$10^9 A_s$	2.137	$2.17^{+0.14}_{-0.14}$ (+0.1 $\sigma$ )	$f_{2000}^{143}$	30.0	$29^{+5}_{-6}$ (-0.5 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.2	$46^{+10}_{-10}$ (-2.7 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.8693	$1.868^{+0.022}_{-0.023}$ (-0.4 $\sigma$ )	$f_{2000}^{217}$	107.24	$106.5^{+3.8}_{-3.8}$ (+0.2 $\sigma$ )
$A_{143}^{\text{tSZ}}$	2.48	< 6.59 (-1.0 $\sigma$ )	$D_{40}$	1221.6	$1220^{+23}_{-23}$ (-0.6 $\sigma$ )	$f_{2000}^{143 \times 217}$	32.32	$32^{+4}_{-4}$ (-0.4 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.387	$0.51^{+0.23}_{-0.20}$	$D_{220}$	5694	$5697^{+80}_{-79}$ (-0.6 $\sigma$ )	$\chi^2_{\text{lensing}}$	9.13	9.6 ( $\nu$ : 0.9) (-0.1 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{810}$	2526.4	$2528^{+26}_{-26}$ (-0.3 $\sigma$ )	$\chi^2_{\text{lowTEB}}$	10494.72	10495.4 ( $\nu$ : 1.1) (-0.3 $\sigma$ )
$A^{\text{kSZ}}$	6.6	—	$D_{1420}$	813.0	$814.5^{+9.8}_{-9.8}$ (-0.1 $\sigma$ )	$\chi^2_{\text{CamSpec}}$	8046.6	8061.3 ( $\nu$ : 16.4)
$A_{100}^{\text{dust}}$	0.984	$0.99^{+0.38}_{-0.37}$	$n_{\text{s},0.002}$	0.9682	$0.9706^{+0.0097}_{-0.0093}$ (+0.4 $\sigma$ )	$\chi^2_{6\text{DF}}$	0.010	0.069 ( $\nu$ : 0.0) (-0.0 $\sigma$ )
$A_{143}^{\text{dust}}$	1.032	$1.03^{+0.36}_{-0.35}$	$Y_{\text{P}}$	0.244911	$0.24494^{+0.00017}_{-0.00016}$ (-4.5 $\sigma$ )	$\chi^2_{\text{MGS}}$	1.41	1.38 ( $\nu$ : 0.2) (+0.0 $\sigma$ )
$A_{217}^{\text{dust}}$	1.230	$1.21^{+0.23}_{-0.23}$	Age/Gyr	13.802	$13.818^{+0.086}_{-0.081}$ (-0.0 $\sigma$ )	$\chi^2_{\text{DR11CMass}}$	2.39	2.97 ( $\nu$ : 0.3) (-0.0 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.952	$0.98^{+0.35}_{-0.35}$	$z_*$	1089.96	$1089.85^{+0.62}_{-0.62}$ (-0.1 $\sigma$ )	$\chi^2_{\text{DR11LOWZ}}$	0.48	0.75 ( $\nu$ : 0.2) (-0.0 $\sigma$ )
$c_{100}$	0.99657	$0.9968^{+0.0019}_{-0.0019}$ (-1.5 $\sigma$ )	$r_*$	144.89	$144.99^{+0.68}_{-0.64}$ (+0.0 $\sigma$ )	$\chi^2_{\text{prior}}$	4.0	8.4 ( $\nu$ : 6.0) (+0.3 $\sigma$ )
$c_{217}$	0.99763	$0.9973^{+0.0034}_{-0.0035}$ (+0.9 $\sigma$ )	$100\theta_*$	1.04126	$1.04129^{+0.00081}_{-0.00083}$ (+0.0 $\sigma$ )	$\chi^2_{\text{CMB}}$	18550.4	18566.3 ( $\nu$ : 16.5) (+1318.9 $\sigma$ )
$\beta_1^1$	-0.09	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	1059.47	$1059.58^{+0.85}_{-0.87}$ (+0.0 $\sigma$ )	$\chi^2_{\text{BAO}}$	4.29	5.2 ( $\nu$ : 0.7) (-0.0 $\sigma$ )
$H_0$	67.73	$67.6^{+1.3}_{-1.3}$ (+0.0 $\sigma$ )	$r_{\text{drag}}$	147.61	$147.69^{+0.71}_{-0.68}$ (+0.0 $\sigma$ )			
$\Omega_\Lambda$	0.6913	$0.690^{+0.017}_{-0.017}$ (+0.0 $\sigma$ )	$k_{\text{D}}$	0.14022	$0.14019^{+0.00084}_{-0.00085}$ (+0.1 $\sigma$ )			

Best-fit  $\chi^2_{\text{eff}} = 18558.71$ ;  $\Delta\chi^2_{\text{eff}} = 7281.80$ ;  $\bar{\chi}^2_{\text{eff}} = 18579.90$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 7282.36$ ;  $R - 1 = 0.00975$   
 $\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 ( $\Delta$  0.00) MGS: 1.41 ( $\Delta$  -0.07) DR11CMass: 2.39 ( $\Delta$  -0.00) DR11LOWZ: 0.48 ( $\Delta$  0.06) CMB - smica\_g30\_ftl\_full\_pp: 9.13 ( $\Delta$  -0.26) lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.33  
 10494.72 ( $\Delta$  -0.18) CamSpec like\_v9.10CMH\_unified: 8046.59

## 7.58 base\_mnu\_CamSpecHM\_TT\_lowTEB\_lensing\_BAO\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00039}_{-0.00039} (+0.0\sigma)$	$\Omega_m$	$0.309^{+0.017}_{-0.016} (-0.0\sigma)$	$100\theta_D$	$0.16093^{+0.00050}_{-0.00048} (-0.1\sigma)$
$\Omega_c h^2$	$0.1180^{+0.0026}_{-0.0029} (-0.0\sigma)$	$\Omega_m h^2$	$0.1415^{+0.0024}_{-0.0024} (-0.0\sigma)$	$z_{\text{eq}}$	$3353^{+60}_{-65} (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04108^{+0.00081}_{-0.00082} (+0.0\sigma)$	$\Omega_\nu h^2$	$< 0.00256 (+0.0\sigma)$	$100\theta_{\text{eq}}$	$0.822^{+0.013}_{-0.012} (+0.0\sigma)$
$\tau$	$0.075^{+0.034}_{-0.034} (+0.1\sigma)$	$\Omega_m h^3$	$0.0957^{+0.0011}_{-0.0013} (+0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07177^{+0.00093}_{-0.00090} (+0.0\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.238 (+0.0\sigma)$	$\sigma_8$	$0.811^{+0.027}_{-0.028} (+0.1\sigma)$	$H(0.57)$	$92.97^{+0.69}_{-0.74} (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.077^{+0.064}_{-0.062} (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.014}_{-0.015} (+0.1\sigma)$	$D_A(0.57)$	$1387^{+19}_{-18} (-0.0\sigma)$
$n_s$	$0.9709^{+0.0097}_{-0.0093} (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.604^{+0.017}_{-0.019} (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6753^{+0.0042}_{-0.0042} (-0.0\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0048}_{-0.0048} (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.986^{+0.029}_{-0.030} (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.472^{+0.012}_{-0.013} (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$246^{+40}_{-40} (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.447^{+0.051}_{-0.051} (-0.1\sigma)$	$\sigma_8(0.57)$	$0.604^{+0.021}_{-0.023} (+0.1\sigma)$
$A_{143}^{\text{PS}}$	$39^{+10}_{-10} (-0.6\sigma)$	$z_{\text{re}}$	$9.6^{+3.0}_{-3.0} (+0.1\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24627^{+0.00016}_{-0.00017} (-4.5\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} (+0.1\sigma)$	$10^9 A_s$	$2.17^{+0.14}_{-0.13} (+0.1\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-6} (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.868^{+0.022}_{-0.022} (-0.4\sigma)$	$f_{2000}^{217}$	$106.4^{+3.8}_{-3.8} (+0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.62 (-1.0\sigma)$	$D_{40}$	$1219^{+23}_{-23} (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} (-0.4\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.20}$	$D_{220}$	$5698^{+79}_{-78} (-0.6\sigma)$	$\chi_{\text{lensing}}^2$	$9.7 (\nu: 0.9) (-0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2528^{+27}_{-26} (-0.3\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.3 (\nu: 1.1) (-0.3\sigma)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$814.7^{+9.8}_{-9.9} (-0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.3 (\nu: 16.4)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$n_{s,0.002}$	$0.9709^{+0.0097}_{-0.0093} (+0.4\sigma)$	$\chi_{\text{H070p6}}^2$	$0.81 (\nu: 0.1) (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.35}_{-0.36}$	$Y_{\text{P}}$	$0.24494^{+0.00017}_{-0.00016} (-4.5\sigma)$	$\chi_{6\text{DF}}^2$	$0.058 (\nu: 0.0) (-0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$\text{Age/Gyr}$	$13.811^{+0.083}_{-0.078} (-0.0\sigma)$	$\chi_{\text{MGS}}^2$	$1.48 (\nu: 0.2) (+0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$z_*$	$1089.83^{+0.62}_{-0.62} (-0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.92 (\nu: 0.3) (+0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	$r_*$	$145.00^{+0.68}_{-0.65} (+0.0\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.64 (\nu: 0.2) (-0.0\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0035} (+0.9\sigma)$	$100\theta_*$	$1.04131^{+0.00080}_{-0.00082} (+0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.4 (\nu: 6.0) (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	$1059.61^{+0.86}_{-0.86} (+0.0\sigma)$	$\chi_{\text{CMB}}^2$	$18566.3 (\nu: 16.5) (+1322.1\sigma)$
$H_0$	$67.7^{+1.3}_{-1.3} (+0.0\sigma)$	$r_{\text{drag}}$	$147.70^{+0.71}_{-0.69} (+0.0\sigma)$	$\chi_{\text{BAO}}^2$	$5.1 (\nu: 0.6) (+0.0\sigma)$
$\Omega_\Lambda$	$0.691^{+0.016}_{-0.017} (+0.0\sigma)$	$k_D$	$0.14019^{+0.00085}_{-0.00084} (+0.0\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18580.61; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.42; R - 1 = 0.01203$$

## 7.59 base\_mnu\_CamSpecHM\_TT\_lowTEB\_lensing\_BAO\_post\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00039}_{-0.00039} \quad (+0.0\sigma)$	$\Omega_m$	$0.308^{+0.016}_{-0.016} \quad (-0.0\sigma)$	$100\theta_D$	$0.16093^{+0.00050}_{-0.00048} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1179^{+0.0026}_{-0.0028} \quad (-0.0\sigma)$	$\Omega_m h^2$	$0.1413^{+0.0023}_{-0.0024} \quad (-0.0\sigma)$	$z_{\text{eq}}$	$3351^{+60}_{-65} \quad (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04109^{+0.00081}_{-0.00082} \quad (+0.0\sigma)$	$\Omega_\nu h^2$	$< 0.00249 \quad (+0.0\sigma)$	$100\theta_{\text{eq}}$	$0.823^{+0.013}_{-0.011} \quad (+0.0\sigma)$
$\tau$	$0.075^{+0.034}_{-0.033} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.0958^{+0.0012}_{-0.0012} \quad (+0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07182^{+0.00091}_{-0.00087} \quad (+0.0\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.232 \quad (+0.0\sigma)$	$\sigma_8$	$0.812^{+0.026}_{-0.028} \quad (+0.1\sigma)$	$H(0.57)$	$93.00^{+0.67}_{-0.72} \quad (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.077^{+0.065}_{-0.058} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.014}_{-0.014} \quad (+0.1\sigma)$	$D_A(0.57)$	$1386^{+18}_{-18} \quad (-0.0\sigma)$
$n_s$	$0.9711^{+0.0096}_{-0.0092} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.017}_{-0.019} \quad (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6751^{+0.0041}_{-0.0041} \quad (-0.0\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0048}_{-0.0048} \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.986^{+0.029}_{-0.030} \quad (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.472^{+0.012}_{-0.013} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$246^{+40}_{-40} \quad (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.051}_{-0.051} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.605^{+0.021}_{-0.022} \quad (+0.1\sigma)$
$A_{143}^{\text{PS}}$	$39^{+10}_{-10} \quad (-0.6\sigma)$	$z_{\text{re}}$	$9.6^{+3.0}_{-3.0} \quad (+0.1\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24627^{+0.00016}_{-0.00017} \quad (-4.5\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s$	$2.17^{+0.14}_{-0.13} \quad (+0.1\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-6} \quad (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.867^{+0.022}_{-0.022} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.4^{+3.8}_{-3.8} \quad (+0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.64 \quad (-1.0\sigma)$	$D_{40}$	$1219^{+23}_{-23} \quad (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.4\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.22}$	$D_{220}$	$5698^{+79}_{-78} \quad (-0.6\sigma)$	$\chi_{\text{lensing}}^2$	$9.7 \quad (\nu: 0.9) \quad (-0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2528^{+27}_{-26} \quad (-0.3\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.3 \quad (\nu: 1.1) \quad (-0.3\sigma)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$814.7^{+9.8}_{-9.8} \quad (-0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.3 \quad (\nu: 16.4)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$n_{\text{s},0.002}$	$0.9711^{+0.0096}_{-0.0092} \quad (+0.4\sigma)$	$\chi_{\text{H070p6}}^2$	$0.77 \quad (\nu: 0.1) \quad (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.36}$	$Y_{\text{P}}$	$0.24494^{+0.00017}_{-0.00016} \quad (-4.5\sigma)$	$\chi_{\text{JLA}}^2$	$706.71 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$\text{Age/Gyr}$	$13.808^{+0.081}_{-0.077} \quad (-0.0\sigma)$	$\chi_{6\text{DF}}^2$	$0.052 \quad (\nu: 0.0) \quad (+0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$z_*$	$1089.81^{+0.61}_{-0.62} \quad (-0.1\sigma)$	$\chi_{\text{MGS}}^2$	$1.54 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$r_*$	$145.02^{+0.67}_{-0.65} \quad (+0.0\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.89 \quad (\nu: 0.3) \quad (+0.0\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$100\theta_*$	$1.04132^{+0.00080}_{-0.00082} \quad (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.58 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	$1059.62^{+0.85}_{-0.86} \quad (+0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.0) \quad (+0.3\sigma)$
$H_0$	$67.8^{+1.3}_{-1.3} \quad (+0.0\sigma)$	$r_{\text{drag}}$	$147.71^{+0.71}_{-0.69} \quad (+0.0\sigma)$	$\chi_{\text{CMB}}^2$	$18566.3 \quad (\nu: 16.5) \quad (+1322.3\sigma)$
$\Omega_\Lambda$	$0.692^{+0.016}_{-0.016} \quad (+0.0\sigma)$	$k_D$	$0.14018^{+0.00085}_{-0.00084} \quad (+0.0\sigma)$	$\chi_{\text{BAO}}^2$	$5.1 \quad (\nu: 0.6) \quad (+0.0\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 19287.25; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.44; R - 1 = 0.01238$$

## 7.60 base\_mnu\_CamSpecHM\_TTTEEE\_lowTEB\_lensing\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022354	$0.02237^{+0.00029}_{-0.00028}$ (+0.6 $\sigma$ )	$H_0$	67.81	$67.6^{+1.2}_{-1.3}$ (+0.2 $\sigma$ )	$r_{\text{drag}}$	147.46	$147.49^{+0.52}_{-0.51}$ (-0.0 $\sigma$ )
$\Omega_c h^2$	0.11872	$0.1185^{+0.0021}_{-0.0022}$ (-0.3 $\sigma$ )	$\Omega_\Lambda$	0.6917	$0.689^{+0.014}_{-0.016}$ (+0.2 $\sigma$ )	$k_D$	0.14048	$0.14047^{+0.00059}_{-0.00062}$ (+0.3 $\sigma$ )
$100\theta_{\text{MC}}$	1.04089	$1.04089^{+0.00056}_{-0.00057}$ (-0.0 $\sigma$ )	$\Omega_m$	0.3083	$0.311^{+0.016}_{-0.014}$ (-0.2 $\sigma$ )	$100\theta_D$	0.160803	$0.16078^{+0.00036}_{-0.00036}$ (-0.7 $\sigma$ )
$\tau$	0.0662	$0.070^{+0.030}_{-0.028}$ (+0.2 $\sigma$ )	$\Omega_m h^2$	0.14176	$0.1419^{+0.0021}_{-0.0020}$ (-0.2 $\sigma$ )	$z_{\text{eq}}$	3371.1	$3366^{+49}_{-49}$ (-0.2 $\sigma$ )
$\Sigma m_\nu$ [eV]	0.064	< 0.220 (+0.1 $\sigma$ )	$\Omega_\nu h^2$	0.00069	< 0.00236 (+0.1 $\sigma$ )	$100\theta_{\text{eq}}$	0.8188	$0.8198^{+0.0096}_{-0.0092}$ (+0.3 $\sigma$ )
$\ln(10^{10} A_s)$	3.061	$3.068^{+0.057}_{-0.053}$ (+0.1 $\sigma$ )	$\Omega_m h^3$	0.09613	$0.09592^{+0.00092}_{-0.0010}$ (+0.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07176	$0.07163^{+0.00081}_{-0.00087}$ (+0.2 $\sigma$ )
$n_s$	0.9680	$0.9691^{+0.0086}_{-0.0081}$ (+0.6 $\sigma$ )	$\sigma_8$	0.8158	$0.810^{+0.025}_{-0.027}$ (-0.1 $\sigma$ )	$H(0.57)$	93.10	$92.97^{+0.64}_{-0.69}$ (+0.2 $\sigma$ )
$y_{\text{cal}}$	0.99991	$1.0002^{+0.0049}_{-0.0050}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4530	$0.452^{+0.012}_{-0.013}$ (-0.3 $\sigma$ )	$D_A(0.57)$	1384.8	$1388^{+18}_{-17}$ (-0.2 $\sigma$ )
$A_{100}^{\text{PS}}$	249.2	$245^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6079	$0.605^{+0.016}_{-0.017}$ (-0.2 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.67520	$0.6758^{+0.0041}_{-0.0037}$ (-0.2 $\sigma$ )
$A_{143}^{\text{PS}}$	35.2	$38^{+10}_{-10}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	0.9907	$0.985^{+0.025}_{-0.028}$ (-0.2 $\sigma$ )	$f\sigma_8(0.57)$	0.4737	$0.472^{+0.011}_{-0.012}$ (-0.1 $\sigma$ )
$A_{217}^{\text{PS}}$	94.9	$98^{+30}_{-30}$ (+0.1 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.4461	$2.446^{+0.049}_{-0.050}$ (-0.3 $\sigma$ )	$\sigma_8(0.57)$	0.6077	$0.603^{+0.020}_{-0.021}$ (-0.0 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.8	$46^{+10}_{-10}$ (-2.9 $\sigma$ )	$z_{\text{re}}$	8.83	$9.1^{+2.7}_{-2.7}$ (+0.2 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246296	$0.24630^{+0.00012}_{-0.00012}$ (-5.9 $\sigma$ )
$A_{143}^{\text{tSZ}}$	3.30	< 6.75 (-1.0 $\sigma$ )	$10^9 A_s$	2.135	$2.15^{+0.13}_{-0.11}$ (+0.1 $\sigma$ )	$f_{2000}^{143}$	29.3	$29^{+5}_{-5}$ (-0.5 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.410	$0.51^{+0.23}_{-0.21}$	$10^9 A_s e^{-2\tau}$	1.8701	$1.870^{+0.022}_{-0.022}$ (-0.6 $\sigma$ )	$f_{2000}^{217}$	106.51	$106.2^{+3.5}_{-3.7}$ (+0.0 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1223.2	$1223^{+22}_{-22}$ (-0.7 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.74	$31^{+4}_{-4}$ (-0.6 $\sigma$ )
$A^{\text{kSZ}}$	5.2	—	$D_{220}$	5708	$5710^{+76}_{-76}$ (-0.5 $\sigma$ )	$\chi_{\text{lensing}}^2$	9.37	9.8 ( $\nu$ : 1.0) (-0.2 $\sigma$ )
$A_{100}^{\text{dust}}$	0.993	$0.99^{+0.37}_{-0.38}$	$D_{810}$	2527.3	$2529^{+26}_{-27}$ (-0.4 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10494.81	10495.3 ( $\nu$ : 0.7) (-0.5 $\sigma$ )
$A_{143}^{\text{dust}}$	1.032	$1.03^{+0.36}_{-0.36}$	$D_{1420}$	813.8	$815.0^{+9.3}_{-9.4}$ (-0.0 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	12937.6	12953.9 ( $\nu$ : 18.5)
$A_{217}^{\text{dust}}$	1.209	$1.21^{+0.23}_{-0.23}$	$n_{s,0.002}$	0.9680	$0.9691^{+0.0086}_{-0.0081}$ (+0.6 $\sigma$ )	$\chi_{6\text{DF}}^2$	0.010	0.068 ( $\nu$ : 0.0) (-0.1 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.957	$0.98^{+0.34}_{-0.35}$	$Y_{\text{P}}$	0.244964	$0.24497^{+0.00013}_{-0.00012}$ (-5.9 $\sigma$ )	$\chi_{\text{MGS}}^2$	1.41	1.31 ( $\nu$ : 0.1) (+0.2 $\sigma$ )
$c_{100}$	0.99666	$0.9968^{+0.0019}_{-0.0019}$ (-1.8 $\sigma$ )	Age/Gyr	13.792	$13.807^{+0.074}_{-0.068}$ (-0.2 $\sigma$ )	$\chi_{\text{DR11CMass}}^2$	2.41	2.93 ( $\nu$ : 0.3) (-0.1 $\sigma$ )
$c_{217}$	0.99731	$0.9971^{+0.0035}_{-0.0035}$ (+0.7 $\sigma$ )	$z_*$	1089.807	$1089.77^{+0.47}_{-0.47}$ (-0.6 $\sigma$ )	$\chi_{\text{DR11LOWZ}}^2$	0.48	0.80 ( $\nu$ : 0.2) (-0.2 $\sigma$ )
$c_{TE}$	1.0052	$1.0052^{+0.0087}_{-0.0085}$	$r_*$	144.78	$144.82^{+0.50}_{-0.50}$ (+0.1 $\sigma$ )	$\chi_{\text{prior}}^2$	3.8	9.0 ( $\nu$ : 6.2) (-1.9 $\sigma$ )
$c_{EE}$	1.0014	$1.0015^{+0.0083}_{-0.0082}$	$100\theta_*$	1.04109	$1.04111^{+0.00056}_{-0.00057}$ (+0.0 $\sigma$ )	$\chi_{\text{CMB}}^2$	23441.8	23458.9 ( $\nu$ : 18.4) (+1593.8 $\sigma$ )
$\beta_1^1$	-0.11	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	1059.78	$1059.82^{+0.61}_{-0.60}$ (+0.5 $\sigma$ )	$\chi_{\text{BAO}}^2$	4.31	5.1 ( $\nu$ : 0.6) (-0.1 $\sigma$ )

Best-fit  $\chi_{\text{eff}}^2 = 23449.86$ ;  $\Delta\chi_{\text{eff}}^2 = 10498.16$ ;  $\bar{\chi}_{\text{eff}}^2 = 23473.05$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 10488.57$ ;  $R - 1 = 0.00818$   
 $\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 ( $\Delta$  0.00) MGS: 1.41 ( $\Delta$  0.00) DR11CMass: 2.41 ( $\Delta$  0.00) DR11LOWZ: 0.48 ( $\Delta$  -0.00) CMB - smica\_g30\_ftl\_full\_pp: 9.37 ( $\Delta$  -0.62) lowl\_SMW\_70\_dx11d\_2014\_10\_03  
10494.81 ( $\Delta$  -0.41) CamSpec like\_v9.10CMH\_unified: 12937.61



# 7.61 base\_mnu\_CamSpecHM\_TTTEEE\_lowTEB\_lensing\_BAO\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00029}_{-0.00028} \quad (+0.5\sigma)$	$\Omega_\Lambda$	$0.691^{+0.014}_{-0.016} \quad (+0.2\sigma)$	$100\theta_D$	$0.16078^{+0.00036}_{-0.00035} \quad (-0.7\sigma)$
$\Omega_c h^2$	$0.1184^{+0.0021}_{-0.0022} \quad (-0.3\sigma)$	$\Omega_m$	$0.309^{+0.016}_{-0.015} \quad (-0.2\sigma)$	$z_{\text{eq}}$	$3365^{+49}_{-48} \quad (-0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04090^{+0.00056}_{-0.00056} \quad (-0.0\sigma)$	$\Omega_m h^2$	$0.1418^{+0.0020}_{-0.0020} \quad (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.8201^{+0.0095}_{-0.0091} \quad (+0.2\sigma)$
$\tau$	$0.070^{+0.030}_{-0.027} \quad (+0.2\sigma)$	$\Omega_\nu h^2$	$< 0.00224 \quad (+0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07170^{+0.00079}_{-0.00085} \quad (+0.2\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.208 \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.09597^{+0.00089}_{-0.00097} \quad (+0.1\sigma)$	$H(0.57)$	$93.02^{+0.61}_{-0.67} \quad (+0.2\sigma)$
$\ln(10^{10} A_s)$	$3.068^{+0.057}_{-0.052} \quad (+0.1\sigma)$	$\sigma_8$	$0.811^{+0.025}_{-0.026} \quad (-0.1\sigma)$	$D_A(0.57)$	$1387^{+18}_{-17} \quad (-0.2\sigma)$
$n_s$	$0.9693^{+0.0084}_{-0.0080} \quad (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.013} \quad (-0.3\sigma)$	$F_{\text{AP}}(0.57)$	$0.6755^{+0.0040}_{-0.0036} \quad (-0.2\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0049}_{-0.0050} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.015}_{-0.017} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.472^{+0.011}_{-0.012} \quad (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.986^{+0.025}_{-0.028} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.604^{+0.020}_{-0.021} \quad (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.445^{+0.048}_{-0.050} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24631^{+0.00012}_{-0.00012} \quad (-5.9\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$9.1^{+2.7}_{-2.7} \quad (+0.2\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.15^{+0.13}_{-0.11} \quad (+0.1\sigma)$	$f_{2000}^{217}$	$106.1^{+3.6}_{-3.7} \quad (+0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.75 \quad (-1.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.022}_{-0.022} \quad (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.21}$	$D_{40}$	$1222^{+22}_{-23} \quad (-0.7\sigma)$	$\chi_{\text{lensing}}^2$	$9.8 \quad (\nu: 1.0) \quad (-0.2\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5711^{+76}_{-76} \quad (-0.5\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.2 \quad (\nu: 0.7) \quad (-0.5\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2529^{+27}_{-27} \quad (-0.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$12953.9 \quad (\nu: 18.9)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$D_{1420}$	$815.0^{+9.3}_{-9.3} \quad (-0.0\sigma)$	$\chi_{\text{H070p6}}^2$	$0.80 \quad (\nu: 0.1) \quad (-0.2\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.36}$	$n_{\text{s},0.002}$	$0.9693^{+0.0084}_{-0.0080} \quad (+0.6\sigma)$	$\chi_{6\text{DF}}^2$	$0.056 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.22}$	$Y_{\text{P}}$	$0.24498^{+0.00013}_{-0.00012} \quad (-6.0\sigma)$	$\chi_{\text{MGS}}^2$	$1.40 \quad (\nu: 0.1) \quad (+0.2\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$\text{Age}/\text{Gyr}$	$13.802^{+0.072}_{-0.065} \quad (-0.2\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.86 \quad (\nu: 0.2) \quad (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.7\sigma)$	$z_*$	$1089.76^{+0.47}_{-0.46} \quad (-0.6\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.69 \quad (\nu: 0.2) \quad (-0.2\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0035} \quad (+0.8\sigma)$	$r_*$	$144.83^{+0.50}_{-0.49} \quad (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$9.0 \quad (\nu: 6.1) \quad (-1.9\sigma)$
$c_{TE}$	$1.0052^{+0.0088}_{-0.0086}$	$100\theta_*$	$1.04111^{+0.00055}_{-0.00056} \quad (-0.0\sigma)$	$\chi_{\text{CMB}}^2$	$23458.9 \quad (\nu: 18.8) \quad (+1589.2\sigma)$
$c_{EE}$	$1.0015^{+0.0083}_{-0.0082}$	$z_{\text{drag}}$	$1059.83^{+0.60}_{-0.61} \quad (+0.5\sigma)$	$\chi_{\text{BAO}}^2$	$5.00 \quad (\nu: 0.5) \quad (-0.1\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_{\text{drag}}$	$147.50^{+0.52}_{-0.51} \quad (-0.0\sigma)$		
$H_0$	$67.7^{+1.1}_{-1.3} \quad (+0.2\sigma)$	$k_D$	$0.14046^{+0.00059}_{-0.00061} \quad (+0.3\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 23473.72; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.51; R - 1 = 0.00991$$

## 7.62 base\_mnu\_CamSpecHM\_TTTEEE\_lowTEB\_lensing\_BAO\_post\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00029}_{-0.00028} \quad (+0.5\sigma)$	$\Omega_\Lambda$	$0.691^{+0.014}_{-0.015} \quad (+0.2\sigma)$	$100\theta_D$	$0.16078^{+0.00036}_{-0.00035} \quad (-0.7\sigma)$
$\Omega_c h^2$	$0.1184^{+0.0021}_{-0.0021} \quad (-0.3\sigma)$	$\Omega_m$	$0.309^{+0.015}_{-0.014} \quad (-0.2\sigma)$	$z_{\text{eq}}$	$3364^{+48}_{-48} \quad (-0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04091^{+0.00056}_{-0.00056} \quad (-0.0\sigma)$	$\Omega_m h^2$	$0.1417^{+0.0020}_{-0.0019} \quad (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.8203^{+0.0093}_{-0.0090} \quad (+0.2\sigma)$
$\tau$	$0.070^{+0.030}_{-0.027} \quad (+0.2\sigma)$	$\Omega_\nu h^2$	$< 0.00217 \quad (+0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07174^{+0.00077}_{-0.00081} \quad (+0.2\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.201 \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.09599^{+0.00088}_{-0.00095} \quad (+0.1\sigma)$	$H(0.57)$	$93.05^{+0.60}_{-0.65} \quad (+0.2\sigma)$
$\ln(10^{10} A_s)$	$3.068^{+0.057}_{-0.052} \quad (+0.1\sigma)$	$\sigma_8$	$0.812^{+0.024}_{-0.026} \quad (-0.1\sigma)$	$D_A(0.57)$	$1386^{+17}_{-16} \quad (-0.2\sigma)$
$n_s$	$0.9694^{+0.0084}_{-0.0079} \quad (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.012}_{-0.013} \quad (-0.3\sigma)$	$F_{\text{AP}}(0.57)$	$0.6753^{+0.0038}_{-0.0035} \quad (-0.2\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0049}_{-0.0050} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.015}_{-0.017} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.472^{+0.011}_{-0.012} \quad (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.987^{+0.025}_{-0.028} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.605^{+0.019}_{-0.020} \quad (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.445^{+0.049}_{-0.050} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24631^{+0.00012}_{-0.00012} \quad (-5.9\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$9.1^{+2.7}_{-2.7} \quad (+0.2\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.15^{+0.12}_{-0.11} \quad (+0.1\sigma)$	$f_{2000}^{217}$	$106.1^{+3.6}_{-3.7} \quad (+0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.75 \quad (-1.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.022}_{-0.022} \quad (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.21}$	$D_{40}$	$1222^{+22}_{-22} \quad (-0.7\sigma)$	$\chi_{\text{lensing}}^2$	$9.8 \quad (\nu: 1.0) \quad (-0.2\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5711^{+76}_{-77} \quad (-0.5\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.2 \quad (\nu: 0.7) \quad (-0.5\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2529^{+27}_{-27} \quad (-0.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$12953.9 \quad (\nu: 18.9)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$D_{1420}$	$815.0^{+9.3}_{-9.3} \quad (-0.0\sigma)$	$\chi_{\text{H070p6}}^2$	$0.76 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.36}$	$n_{\text{s},0.002}$	$0.9694^{+0.0084}_{-0.0079} \quad (+0.6\sigma)$	$\chi_{\text{JLA}}^2$	$706.72 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.24498^{+0.00013}_{-0.00012} \quad (-6.0\sigma)$	$\chi_{6\text{DF}}^2$	$0.049 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$\text{Age}/\text{Gyr}$	$13.799^{+0.070}_{-0.063} \quad (-0.2\sigma)$	$\chi_{\text{MGS}}^2$	$1.45 \quad (\nu: 0.1) \quad (+0.2\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.7\sigma)$	$z_*$	$1089.74^{+0.47}_{-0.46} \quad (-0.6\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.82 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0035} \quad (+0.8\sigma)$	$r_*$	$144.84^{+0.50}_{-0.49} \quad (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.63 \quad (\nu: 0.2) \quad (-0.2\sigma)$
$c_{\text{TE}}$	$1.0052^{+0.0088}_{-0.0086}$	$100\theta_*$	$1.04112^{+0.00055}_{-0.00056} \quad (-0.0\sigma)$	$\chi_{\text{prior}}^2$	$9.0 \quad (\nu: 6.1) \quad (-1.9\sigma)$
$c_{\text{EE}}$	$1.0015^{+0.0083}_{-0.0083}$	$z_{\text{drag}}$	$1059.84^{+0.59}_{-0.59} \quad (+0.5\sigma)$	$\chi_{\text{CMB}}^2$	$23458.9 \quad (\nu: 18.8) \quad (+1588.4\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_{\text{drag}}$	$147.51^{+0.51}_{-0.50} \quad (-0.0\sigma)$	$\chi_{\text{BAO}}^2$	$4.95 \quad (\nu: 0.4) \quad (-0.0\sigma)$
$H_0$	$67.8^{+1.1}_{-1.2} \quad (+0.2\sigma)$	$k_D$	$0.14045^{+0.00059}_{-0.00061} \quad (+0.3\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 24180.34; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.48; R - 1 = 0.01012$$

### 7.63 base\_mnu\_lenonly

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02236	$0.0223^{+0.0017}_{-0.0018}$	$z_{\text{re}}$	9.45	$10.5^{+1.7}_{-1.7}$	$z_{\text{drag}}$	1060.4	$1063.7^{+6.4}_{-6.7}$
$\Omega_c h^2$	0.126	$0.169^{+0.069}_{-0.067}$	$10^9 A_s$	2.22	$1.89^{+0.76}_{-0.68}$	$r_{\text{drag}}$	145.4	$135^{+20}_{-20}$
$100\theta_{\text{MC}}$	1.055	$1.11^{+0.13}_{-0.13}$	$10^9 A_s e^{-2\tau}$	1.93	$1.64^{+0.66}_{-0.59}$	$k_{\text{D}}$	0.1428	$0.155^{+0.020}_{-0.020}$
$\Sigma m_\nu$ [eV]	0.56	—	$D_{40}$	1257	$1014^{+500}_{-400}$	$100\theta_{\text{D}}$	0.1626	$0.170^{+0.018}_{-0.019}$
$\ln(10^{10} A_s)$	3.098	$2.92^{+0.37}_{-0.36}$	$D_{220}$	5764	$4276^{+3000}_{-2000}$	$z_{\text{eq}}$	3542	$4564^{+2000}_{-2000}$
$n_s$	0.9606	$0.960^{+0.040}_{-0.039}$	$D_{810}$	2578	$1778^{+1000}_{-1000}$	$k_{\text{eq}}$	0.0108	$0.0140^{+0.0051}_{-0.0050}$
$H_0$	65.7	—	$D_{1420}$	827	$524^{+400}_{-300}$	$100\theta_{\text{eq}}$	0.801	$0.72^{+0.15}_{-0.14}$
$\Omega_\Lambda$	0.64	$0.46^{+0.47}_{-0.68}$	$D_{2000}$	235	$156^{+100}_{-100}$	$100\theta_{\text{s,eq}}$	0.443	$0.402^{+0.081}_{-0.072}$
$\Omega_{\text{m}}$	0.36	$0.54^{+0.68}_{-0.48}$	$n_{\text{s},0.002}$	0.9606	$0.960^{+0.040}_{-0.039}$	$r_{\text{drag}}/D_{\text{V}}(0.57)$	0.0703	$0.072^{+0.020}_{-0.019}$
$\Omega_{\text{m}} h^2$	0.154	$0.213^{+0.094}_{-0.088}$	$Y_{\text{P}}$	0.24539	$0.24536^{+0.00073}_{-0.00081}$	$H(0.57)$	93.5	$105^{+30}_{-30}$
$\Omega_\nu h^2$	0.0061	$< 0.0482$	$Y_{\text{P}}^{\text{BBN}}$	0.24671	$0.24668^{+0.00074}_{-0.00081}$	$D_{\text{A}}(0.57)$	1403	$1333^{+500}_{-400}$
$\Omega_{\text{m}} h^3$	0.101	$0.148^{+0.11}_{-0.094}$	$10^5 \text{D}/\text{H}$	2.593	$2.61^{+0.35}_{-0.33}$	$F_{\text{AP}}(0.57)$	0.687	$0.716^{+0.11}_{-0.090}$
$\sigma_8$	0.754	$0.69^{+0.20}_{-0.20}$	Age/Gyr	13.65	$12.4^{+3.4}_{-3.0}$	$f\sigma_8(0.57)$	0.454	$0.420^{+0.075}_{-0.094}$
$\sigma_8 \Omega_{\text{m}}^{0.5}$	0.451	$0.47^{+0.12}_{-0.10}$	$z_*$	1090.6	$1094.8^{+7.0}_{-6.8}$	$\sigma_8(0.57)$	0.554	$0.50^{+0.21}_{-0.21}$
$\sigma_8 \Omega_{\text{m}}^{0.25}$	0.5829	$0.566^{+0.049}_{-0.049}$	$r_*$	142.8	$133^{+20}_{-10}$	$\chi^2_{\text{lensing}}$	8.25	11.1 ( $\nu$ : 2.3)
$\sigma_8/h^{0.5}$	0.930	$0.84^{+0.13}_{-0.13}$	$100\theta_*$	1.055	$1.11^{+0.13}_{-0.13}$	$\chi^2_{\text{prior}}$	0.01	2.0 ( $\nu$ : 1.9)
$\langle d^2 \rangle^{1/2}$	2.494	$2.45^{+0.13}_{-0.12}$	$D_{\text{A}}/\text{Gpc}$	13.53	$12.0^{+2.7}_{-2.5}$			

Best-fit  $\chi^2_{\text{eff}} = 8.25$ ;  $\bar{\chi}^2_{\text{eff}} = 13.05$ ;  $R - 1 = 0.00493$   
 $\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp\_lenonly: 8.24

## 7.64 base\_mnu\_lensonly\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02228	$0.0223^{+0.0018}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	1.959	$1.66^{+0.47}_{-0.46}$	$z_{\text{eq}}$	3438	$4551^{+1000}_{-1000}$
$\Omega_c h^2$	0.122	$0.168^{+0.061}_{-0.059}$	$D_{40}$	1296	$1028^{+400}_{-300}$	$k_{\text{eq}}$	0.01050	$0.0140^{+0.0046}_{-0.0044}$
$100\theta_{\text{MC}}$	1.053	$1.121^{+0.073}_{-0.079}$	$D_{220}$	5952	$4333^{+2000}_{-2000}$	$100\theta_{\text{eq}}$	0.817	$0.72^{+0.12}_{-0.11}$
$\Sigma m_\nu$ [eV]	0.41	< 4.16	$D_{810}$	2633	$1842^{+1000}_{-1000}$	$100\theta_{\text{s,eq}}$	0.452	$0.403^{+0.061}_{-0.057}$
$\ln(10^{10} A_s)$	3.115	$2.94^{+0.27}_{-0.27}$	$D_{1420}$	842	$527^{+400}_{-300}$	$r_{\text{drag}}/D_V(0.57)$	0.07184	$0.0725^{+0.0012}_{-0.0012}$
$n_s$	0.9604	$0.959^{+0.038}_{-0.038}$	$D_{2000}$	239	$153^{+100}_{-90}$	$H(0.57)$	94.1	$105^{+10}_{-10}$
$H_0$	67.7	$71.3^{+5.2}_{-4.9}$	$n_{\text{s},0.002}$	0.9604	$0.959^{+0.038}_{-0.038}$	$D_A(0.57)$	1378	$1272^{+130}_{-130}$
$\Omega_\Lambda$	0.677	$0.59^{+0.11}_{-0.11}$	$Y_{\text{P}}$	0.24535	$0.24537^{+0.00078}_{-0.00081}$	$F_{\text{AP}}(0.57)$	0.6790	$0.699^{+0.024}_{-0.025}$
$\Omega_{\text{m}}$	0.323	$0.41^{+0.11}_{-0.10}$	$Y_{\text{P}}^{\text{BBN}}$	0.24668	$0.24670^{+0.00079}_{-0.00081}$	$f\sigma_8(0.57)$	0.4592	$0.438^{+0.041}_{-0.044}$
$\Omega_{\text{m}} h^2$	0.148	$0.211^{+0.084}_{-0.079}$	$10^5 \text{D}/\text{H}$	2.608	$2.61^{+0.36}_{-0.32}$	$\sigma_8(0.57)$	0.577	$0.517^{+0.083}_{-0.077}$
$\Omega_\nu h^2$	0.0044	< 0.0447	Age/Gyr	13.62	$12.1^{+1.8}_{-1.7}$	$\chi^2_{\text{lensing}}$	8.27	11.0 ( $\nu$ : 2.2)
$\Omega_{\text{m}} h^3$	0.100	$0.152^{+0.071}_{-0.065}$	$z_*$	1090.2	$1094.6^{+6.1}_{-6.0}$	$\chi^2_{6\text{DF}}$	0.04	0.64 ( $\nu$ : 0.2)
$\sigma_8$	0.776	$0.715^{+0.091}_{-0.085}$	$r_*$	144.0	$133^{+13}_{-13}$	$\chi^2_{\text{MGS}}$	1.16	0.49 ( $\nu$ : 0.2)
$\sigma_8 \Omega_{\text{m}}^{0.5}$	0.4412	$0.456^{+0.042}_{-0.040}$	$100\theta_*$	1.053	$1.121^{+0.074}_{-0.079}$	$\chi^2_{\text{DR11CMass}}$	2.00	1.8 ( $\nu$ : 1.1)
$\sigma_8 \Omega_{\text{m}}^{0.25}$	0.5852	$0.571^{+0.049}_{-0.049}$	$D_A/\text{Gpc}$	13.67	$11.9^{+2.1}_{-1.9}$	$\chi^2_{\text{DR11LOWZ}}$	0.62	1.4 ( $\nu$ : 0.6)
$\sigma_8/h^{0.5}$	0.943	$0.85^{+0.13}_{-0.12}$	$z_{\text{drag}}$	1059.9	$1063.7^{+6.5}_{-6.2}$	$\chi^2_{\text{prior}}$	0.00	2.0 ( $\nu$ : 2.0)
$\langle d^2 \rangle^{1/2}$	2.486	$2.45^{+0.12}_{-0.11}$	$r_{\text{drag}}$	146.7	$135^{+14}_{-13}$	$\chi^2_{\text{BAO}}$	3.81	4.3 ( $\nu$ : 1.1)
$z_{\text{re}}$	9.36	$10.5^{+1.5}_{-1.4}$	$k_{\text{D}}$	0.1413	$0.155^{+0.018}_{-0.018}$			
$10^9 A_s$	2.25	$1.91^{+0.55}_{-0.52}$	$100\theta_{\text{D}}$	0.1626	$0.171^{+0.010}_{-0.011}$			

Best-fit  $\chi^2_{\text{eff}} = 12.08$ ;  $\bar{\chi}^2_{\text{eff}} = 17.34$ ;  $R - 1 = 0.01298$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.04 MGS: 1.16 DR11CMass: 2.00 DR11LOWZ: 0.61 CMB - smica\_g30\_ftl\_full\_pp\_lensonly: 8.27

## 7.65 base\_mnu\_lenonly\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02222	$0.0223^{+0.0018}_{-0.0018}$	$10^9 A_s$	2.17	$1.88^{+0.66}_{-0.58}$	$r_{\text{drag}}$	146.0	$140^{+11}_{-9.9}$
$\Omega_c h^2$	0.1243	$0.146^{+0.037}_{-0.039}$	$10^9 A_s e^{-2\tau}$	1.89	$1.64^{+0.57}_{-0.50}$	$k_D$	0.1420	$0.149^{+0.012}_{-0.013}$
$\Sigma m_\nu$ [eV]	0.53	$< 2.48$	$D_{40}$	1220	$1017^{+500}_{-400}$	$100\theta_D$	0.16071	$0.1598^{+0.0031}_{-0.0029}$
$\ln(10^{10} A_s)$	3.079	$2.92^{+0.33}_{-0.31}$	$D_{220}$	5667	$4637^{+2000}_{-2000}$	$z_{\text{eq}}$	3502	$4013^{+900}_{-900}$
$n_s$	0.9632	$0.960^{+0.040}_{-0.039}$	$D_{810}$	2540	$2169^{+900}_{-700}$	$k_{\text{eq}}$	0.01069	$0.0123^{+0.0028}_{-0.0029}$
$H_0$	61.8	$< 68.7$	$D_{1420}$	820	$710^{+300}_{-200}$	$100\theta_{\text{eq}}$	0.796	$0.73^{+0.14}_{-0.12}$
$\Omega_\Lambda$	0.60	$0.27^{+0.53}_{-0.65}$	$D_{2000}$	232	$202^{+70}_{-60}$	$100\theta_{\text{s,eq}}$	0.441	$0.406^{+0.073}_{-0.063}$
$\Omega_m$	0.40	$0.73^{+0.65}_{-0.53}$	$n_{s,0.002}$	0.9632	$0.960^{+0.040}_{-0.039}$	$r_{\text{drag}}/D_V(0.57)$	0.0676	$0.0618^{+0.012}_{-0.0095}$
$\Omega_m h^2$	0.152	$0.181^{+0.050}_{-0.051}$	$Y_P$	0.24533	$0.24536^{+0.00077}_{-0.00084}$	$H(0.57)$	90.52	$89.9^{+3.6}_{-2.8}$
$\Omega_\nu h^2$	0.0057	$< 0.0266$	$Y_P^{\text{BBN}}$	0.24665	$0.24669^{+0.00077}_{-0.00084}$	$D_A(0.57)$	1470	$1595^{+200}_{-200}$
$\Omega_m h^3$	0.0941	$0.0935^{+0.0057}_{-0.0054}$	$10^5 D/H$	2.620	$2.61^{+0.36}_{-0.34}$	$F_{\text{AP}}(0.57)$	0.697	$0.750^{+0.091}_{-0.090}$
$\sigma_8$	0.736	$0.64^{+0.18}_{-0.16}$	Age/Gyr	14.058	$14.23^{+0.42}_{-0.49}$	$f\sigma_8(0.57)$	0.450	$0.400^{+0.076}_{-0.085}$
$\sigma_8 \Omega_m^{0.5}$	0.465	$0.514^{+0.097}_{-0.11}$	$z_*$	1090.60	$1092.6^{+4.2}_{-4.3}$	$\sigma_8(0.57)$	0.533	$0.44^{+0.18}_{-0.15}$
$\sigma_8 \Omega_m^{0.25}$	0.5849	$0.569^{+0.047}_{-0.047}$	$r_*$	143.3	$138^{+10}_{-9.5}$	$\chi^2_{\text{lensing}}$	8.25	$10.7 (\nu: 2.2)$
$\sigma_8/h^{0.5}$	0.936	$0.88^{+0.11}_{-0.11}$	$100\theta_*$	1.041191	$1.04125^{+0.00026}_{-0.00031}$	$\chi^2_{\text{prior}}$	0.00	$2.0 (\nu: 2.1)$
$\langle d^2 \rangle^{1/2}$	2.490	$2.48^{+0.11}_{-0.11}$	$D_A/\text{Gpc}$	13.76	$13.24^{+0.99}_{-0.91}$			
$z_{\text{re}}$	9.43	$9.91^{+0.98}_{-1.0}$	$z_{\text{drag}}$	1060.0	$1061.9^{+5.2}_{-5.5}$			

Best-fit  $\chi^2_{\text{eff}} = 8.25$ ;  $\bar{\chi}^2_{\text{eff}} = 12.70$ ;  $R - 1 = 0.00639$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp\_lenonly: 8.25

## 7.66 base\_mnu\_lensonly\_BAO\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02227	$0.0223^{+0.0017}_{-0.0017}$	$10^9 A_s e^{-2\tau}$	1.988	$2.02^{+0.36}_{-0.32}$	$100\theta_D$	0.16102	$0.1611^{+0.0025}_{-0.0025}$
$\Omega_c h^2$	0.1152	$0.1146^{+0.0072}_{-0.0074}$	$D_{40}$	1328	$1345^{+200}_{-200}$	$z_{\text{eq}}$	3284	$3269^{+180}_{-200}$
$\Sigma m_\nu$ [eV]	0.243	< 0.601	$D_{220}$	6196	$6310^{+1000}_{-1000}$	$k_{\text{eq}}$	0.01003	$0.00998^{+0.00056}_{-0.00059}$
$\ln(10^{10} A_s)$	3.130	$3.14^{+0.17}_{-0.16}$	$D_{810}$	2693	$2738^{+500}_{-500}$	$100\theta_{\text{eq}}$	0.8349	$0.838^{+0.036}_{-0.034}$
$n_s$	0.9618	$0.963^{+0.040}_{-0.038}$	$D_{1420}$	862	$876^{+200}_{-200}$	$100\theta_{s,\text{eq}}$	0.4607	$0.463^{+0.020}_{-0.018}$
$H_0$	67.34	$67.2^{+1.8}_{-2.0}$	$D_{2000}$	242.5	$246^{+50}_{-40}$	$r_{\text{drag}}/D_V(0.57)$	0.07177	$0.0718^{+0.0011}_{-0.0011}$
$\Omega_\Lambda$	0.6912	$0.691^{+0.019}_{-0.020}$	$n_{s,0.002}$	0.9618	$0.963^{+0.040}_{-0.038}$	$H(0.57)$	92.50	$92.4^{+1.7}_{-1.8}$
$\Omega_m$	0.3088	$0.309^{+0.020}_{-0.019}$	$Y_P$	0.24535	$0.24533^{+0.00079}_{-0.00077}$	$D_A(0.57)$	1394.2	$1396^{+33}_{-32}$
$\Omega_m h^2$	0.1400	$0.1398^{+0.0051}_{-0.0053}$	$Y_P^{\text{BBN}}$	0.24668	$0.24666^{+0.00080}_{-0.00078}$	$F_{\text{AP}}(0.57)$	0.67535	$0.6754^{+0.0049}_{-0.0049}$
$\Omega_\nu h^2$	0.00262	< 0.00646	$10^5 D/H$	2.610	$2.62^{+0.33}_{-0.33}$	$f\sigma_8(0.57)$	0.4601	$0.457^{+0.025}_{-0.028}$
$\Omega_m h^3$	0.09431	$0.0940^{+0.0047}_{-0.0048}$	Age/Gyr	13.882	$13.90^{+0.25}_{-0.24}$	$\sigma_8(0.57)$	0.5872	$0.582^{+0.038}_{-0.041}$
$\sigma_8$	0.787	$0.780^{+0.051}_{-0.056}$	$z_*$	1089.64	$1089.7^{+2.2}_{-2.2}$	$\chi^2_{\text{lensing}}$	8.35	$9.98 (\nu: 1.7)$
$\sigma_8 \Omega_m^{0.5}$	0.4373	$0.434^{+0.029}_{-0.030}$	$r_*$	145.74	$145.9^{+2.6}_{-2.3}$	$\chi^2_{6\text{DF}}$	0.011	$0.08 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	0.5866	$0.582^{+0.034}_{-0.040}$	$100\theta_*$	1.041102	$1.04111^{+0.00027}_{-0.00026}$	$\chi^2_{\text{MGS}}$	1.41	$1.49 (\nu: 0.3)$
$\sigma_8/h^{0.5}$	0.959	$0.952^{+0.053}_{-0.063}$	$D_A/\text{Gpc}$	13.999	$14.01^{+0.25}_{-0.22}$	$\chi^2_{\text{DR11CMass}}$	2.39	$3.1 (\nu: 0.6)$
$\langle d^2 \rangle^{1/2}$	2.485	$2.49^{+0.11}_{-0.10}$	$z_{\text{drag}}$	1059.36	$1059.3^{+4.1}_{-4.3}$	$\chi^2_{\text{DR11LOWZ}}$	0.48	$0.72 (\nu: 0.3)$
$z_{\text{re}}$	9.178	$9.18^{+0.45}_{-0.46}$	$r_{\text{drag}}$	148.47	$148.6^{+3.1}_{-2.8}$	$\chi^2_{\text{prior}}$	0.01	$2.0 (\nu: 1.9)$
$10^9 A_s$	2.287	$2.32^{+0.41}_{-0.37}$	$k_D$	0.13937	$0.1392^{+0.0040}_{-0.0042}$	$\chi^2_{\text{BAO}}$	4.28	$5.4 (\nu: 1.3)$

Best-fit  $\chi^2_{\text{eff}} = 12.65$ ;  $\bar{\chi}^2_{\text{eff}} = 17.34$ ;  $R - 1 = 0.00450$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.39 DR11LOWZ: 0.48 CMB - smica\_g30\_ftl\_full\_pp\_lensonly: 8.35

## 7.67 base\_mnu\_WLonlyHeymans\_BAO\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02221	$0.0222^{+0.0018}_{-0.0017}$	$10^9 A_s e^{-2\tau}$	1.53	$2.04^{+1.2}_{-0.86}$	$100\theta_D$	0.16098	$0.1611^{+0.0026}_{-0.0024}$
$\Omega_c h^2$	0.1194	$0.112^{+0.010}_{-0.013}$	$D_{40}$	1011	$1358^{+800}_{-600}$	$z_{\text{eq}}$	3383	$3205^{+260}_{-310}$
$\Sigma m_\nu$ [eV]	0.01	$< 1.03$	$D_{220}$	4666	$6493^{+4000}_{-3000}$	$k_{\text{eq}}$	0.01033	$0.00979^{+0.00079}_{-0.00093}$
$\ln(10^{10} A_s)$	2.865	$3.12^{+0.52}_{-0.43}$	$D_{810}$	2062	$2785^{+2000}_{-1000}$	$100\theta_{\text{eq}}$	0.816	$0.852^{+0.067}_{-0.052}$
$n_s$	0.9613	$0.965^{+0.037}_{-0.039}$	$D_{1420}$	663	$890^{+500}_{-400}$	$100\theta_{s,\text{eq}}$	0.4510	$0.470^{+0.035}_{-0.027}$
$H_0$	67.89	$66.9^{+2.0}_{-2.1}$	$D_{2000}$	185	$250^{+100}_{-100}$	$r_{\text{drag}}/D_V(0.57)$	0.07181	$0.0718^{+0.0011}_{-0.0010}$
$\Omega_\Lambda$	0.6927	$0.690^{+0.018}_{-0.019}$	$n_{s,0.002}$	0.9613	$0.965^{+0.037}_{-0.039}$	$H(0.57)$	93.15	$92.0^{+2.1}_{-2.3}$
$\Omega_m$	0.3073	$0.310^{+0.019}_{-0.018}$	$Y_P$	0.24532	$0.24533^{+0.00077}_{-0.00080}$	$D_A(0.57)$	1383.7	$1403^{+39}_{-34}$
$\Omega_m h^2$	0.1417	$0.1386^{+0.0063}_{-0.0068}$	$Y_P^{\text{BBN}}$	0.24665	$0.24665^{+0.00077}_{-0.00080}$	$F_{\text{AP}}(0.57)$	0.67496	$0.6755^{+0.0047}_{-0.0047}$
$\Omega_\nu h^2$	0.0001	$< 0.0111$	$10^5 D/H$	2.621	$2.62^{+0.35}_{-0.34}$	$f\sigma_8(0.57)$	0.4344	$0.430^{+0.035}_{-0.036}$
$\Omega_m h^3$	0.0962	$0.0928^{+0.0058}_{-0.0064}$	Age/Gyr	13.787	$13.96^{+0.33}_{-0.30}$	$\sigma_8(0.57)$	0.5588	$0.547^{+0.048}_{-0.050}$
$\sigma_8$	0.750	$0.732^{+0.062}_{-0.066}$	$z_*$	1090.06	$1089.5^{+2.4}_{-2.2}$	$\chi^2_{6\text{DF}}$	0.006	$0.07 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	0.4160	$0.407^{+0.033}_{-0.034}$	$r_*$	144.73	$146.6^{+3.5}_{-3.2}$	$\chi^2_{\text{MGS}}$	1.47	$1.47 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	0.5587	$0.546^{+0.046}_{-0.047}$	$100\theta_*$	1.040980	$1.04117^{+0.00033}_{-0.00031}$	$\chi^2_{\text{DR11CMass}}$	2.41	$3.06 (\nu: 0.5)$
$\sigma_8/h^{0.5}$	0.911	$0.895^{+0.070}_{-0.076}$	$D_A/\text{Gpc}$	13.903	$14.08^{+0.33}_{-0.30}$	$\chi^2_{\text{DR11LOWZ}}$	0.43	$0.71 (\nu: 0.2)$
$\langle d^2 \rangle^{1/2}$	2.245	$2.44^{+0.52}_{-0.43}$	$z_{\text{drag}}$	1059.51	$1059.1^{+4.2}_{-4.3}$	$\chi^2_{\text{CFHTLENS}}$	96.78	$98.9 (\nu: 2.1)$
$z_{\text{re}}$	9.236	$9.16^{+0.48}_{-0.45}$	$r_{\text{drag}}$	147.45	$149.3^{+3.9}_{-3.6}$	$\chi^2_{\text{prior}}$	0.01	$2.0 (\nu: 1.9)$
$10^9 A_s$	1.76	$2.35^{+1.4}_{-0.99}$	$k_D$	0.14037	$0.1385^{+0.0045}_{-0.0047}$	$\chi^2_{\text{BAO}}$	4.32	$5.3 (\nu: 1.1)$

Best-fit  $\chi^2_{\text{eff}} = 101.11$ ;  $\bar{\chi}^2_{\text{eff}} = 106.23$ ;  $R - 1 = 0.00737$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMass: 2.41 DR11LOWZ: 0.43 WL - CFHTLENS\_6bin\_conservative: 96.78

## 7.68 base\_mnu\_WLonlyHeymans\_H070p6\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02230	$0.0223^{+0.0018}_{-0.0019}$	$10^9 A_s$	2.09	$2.8^{+2.1}_{-1.6}$	$r_{\text{drag}}$	149.1	$150.6^{+6.5}_{-6.5}$
$\Omega_c h^2$	0.1128	$0.107^{+0.020}_{-0.020}$	$10^9 A_s e^{-2\tau}$	1.82	$2.4^{+1.9}_{-1.4}$	$k_D$	0.1387	$0.1373^{+0.0075}_{-0.0072}$
$\Sigma m_\nu$ [eV]	0.011	$< 0.837$	$D_{40}$	1218	$1654^{+1000}_{-1000}$	$100\theta_D$	0.16109	$0.1612^{+0.0028}_{-0.0028}$
$\ln(10^{10} A_s)$	3.04	$> 2.71$	$D_{220}$	5713	$7949^{+7000}_{-5000}$	$z_{\text{eq}}$	3228	$3096^{+500}_{-500}$
$n_s$	0.9652	$0.963^{+0.038}_{-0.037}$	$D_{810}$	2476	$3312^{+3000}_{-2000}$	$k_{\text{eq}}$	0.00985	$0.0095^{+0.0015}_{-0.0015}$
$H_0$	70.4	$69.6^{+6.4}_{-6.8}$	$D_{1420}$	793	$1049^{+800}_{-600}$	$100\theta_{\text{eq}}$	0.846	$0.88^{+0.11}_{-0.10}$
$\Omega_\Lambda$	0.727	$0.721^{+0.088}_{-0.097}$	$D_{2000}$	222	$295^{+200}_{-200}$	$100\theta_{\text{s,eq}}$	0.466	$0.483^{+0.054}_{-0.053}$
$\Omega_m$	0.273	$0.279^{+0.097}_{-0.088}$	$n_{s,0.002}$	0.9652	$0.963^{+0.038}_{-0.037}$	$r_{\text{drag}}/D_V(0.57)$	0.0739	$0.0740^{+0.0059}_{-0.0061}$
$\Omega_m h^2$	0.1352	$0.133^{+0.020}_{-0.018}$	$Y_P$	0.24536	$0.24537^{+0.00083}_{-0.00084}$	$H(0.57)$	93.98	$93.1^{+2.9}_{-2.7}$
$\Omega_\nu h^2$	0.00011	$< 0.00900$	$Y_P^{\text{BBN}}$	0.24669	$0.24669^{+0.00083}_{-0.00084}$	$D_A(0.57)$	1353	$1368^{+85}_{-86}$
$\Omega_m h^3$	0.0951	$0.0924^{+0.0067}_{-0.0066}$	$10^5 D/H$	2.605	$2.61^{+0.36}_{-0.35}$	$F_{\text{AP}}(0.57)$	0.6660	$0.667^{+0.025}_{-0.024}$
$\sigma_8$	0.797	$0.78^{+0.14}_{-0.14}$	Age/Gyr	13.747	$13.88^{+0.31}_{-0.28}$	$f\sigma_8(0.57)$	0.452	$0.447^{+0.058}_{-0.058}$
$\sigma_8 \Omega_m^{0.5}$	0.4163	$0.408^{+0.031}_{-0.033}$	$z_*$	1089.37	$1088.9^{+2.7}_{-2.6}$	$\sigma_8(0.57)$	0.602	$0.59^{+0.13}_{-0.12}$
$\sigma_8 \Omega_m^{0.25}$	0.576	$0.564^{+0.062}_{-0.063}$	$r_*$	146.4	$147.9^{+6.0}_{-6.1}$	$\chi^2_{\text{H070p6}}$	0.01	$1.1 (\nu: 1.4)$
$\sigma_8/h^{0.5}$	0.950	$0.93^{+0.13}_{-0.13}$	$100\theta_*$	1.040972	$1.04114^{+0.00033}_{-0.00031}$	$\chi^2_{\text{CFHTLENS}}$	96.91	$98.8 (\nu: 1.7)$
$\langle d^2 \rangle^{1/2}$	2.38	$2.58^{+0.68}_{-0.57}$	$D_A/\text{Gpc}$	14.06	$14.20^{+0.57}_{-0.58}$	$\chi^2_{\text{prior}}$	0.07	$2.1 (\nu: 2.2)$
$z_{\text{re}}$	9.08	$9.02^{+0.57}_{-0.54}$	$z_{\text{drag}}$	1059.25	$1058.9^{+4.7}_{-5.0}$			

Best-fit  $\chi^2_{\text{eff}} = 96.99$ ;  $\bar{\chi}^2_{\text{eff}} = 101.89$ ;  $R - 1 = 0.00931$

$\chi^2_{\text{eff}}$ : Hubble - H070p6: 0.01 WL - CFHTLENS\_6bin\_conservative: 96.91



## 7.69 base\_mnu\_WLonlyHeymans\_H070p6\_BAO\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02238	$0.0224^{+0.0017}_{-0.0018}$	$D_{40}$	1006	$1314^{+700}_{-500}$	$k_{\text{eq}}$	0.01035	$0.00986^{+0.00073}_{-0.00086}$
$\Omega_c h^2$	0.1195	$0.1127^{+0.0096}_{-0.012}$	$D_{220}$	4658	$6248^{+4000}_{-3000}$	$100\theta_{\text{eq}}$	0.815	$0.847^{+0.060}_{-0.047}$
$\Sigma m_\nu$ [eV]	0.006	< 0.913	$D_{810}$	2059	$2679^{+1000}_{-1000}$	$100\theta_{\text{s,eq}}$	0.4504	$0.467^{+0.031}_{-0.025}$
$\ln(10^{10} A_s)$	2.863	$3.09^{+0.47}_{-0.40}$	$D_{1420}$	663	$857^{+500}_{-300}$	$r_{\text{drag}}/D_V(0.57)$	0.07179	$0.0719^{+0.0011}_{-0.0010}$
$n_s$	0.9631	$0.964^{+0.039}_{-0.040}$	$D_{2000}$	186	$241^{+100}_{-100}$	$H(0.57)$	93.26	$92.3^{+1.9}_{-2.1}$
$H_0$	67.99	$67.3^{+1.9}_{-2.0}$	$n_{s,0.002}$	0.9631	$0.964^{+0.039}_{-0.040}$	$D_A(0.57)$	1381.8	$1396^{+36}_{-34}$
$\Omega_\Lambda$	0.6930	$0.693^{+0.018}_{-0.018}$	$Y_P$	0.24540	$0.24542^{+0.00074}_{-0.00081}$	$F_{\text{AP}}(0.57)$	0.67489	$0.6748^{+0.0046}_{-0.0047}$
$\Omega_m$	0.3070	$0.307^{+0.018}_{-0.018}$	$Y_P^{\text{BBN}}$	0.24672	$0.24674^{+0.00074}_{-0.00081}$	$f\sigma_8(0.57)$	0.4342	$0.431^{+0.033}_{-0.037}$
$\Omega_m h^2$	0.1419	$0.1390^{+0.0058}_{-0.0063}$	$10^5 D/H$	2.589	$2.59^{+0.34}_{-0.33}$	$\sigma_8(0.57)$	0.5586	$0.550^{+0.048}_{-0.050}$
$\Omega_\nu h^2$	0.00007	< 0.00982	Age/Gyr	13.770	$13.91^{+0.31}_{-0.28}$	$\chi^2_{\text{H070p6}}$	0.62	$1.06 (\nu: 0.2)$
$\Omega_m h^3$	0.0965	$0.0936^{+0.0052}_{-0.0060}$	$z_*$	1089.86	$1089.3^{+2.3}_{-2.3}$	$\chi^2_{6\text{DF}}$	0.006	$0.063 (\nu: 0.0)$
$\sigma_8$	0.750	$0.736^{+0.062}_{-0.066}$	$r_*$	144.56	$146.2^{+3.3}_{-3.0}$	$\chi^2_{\text{MGS}}$	1.47	$1.65 (\nu: 0.3)$
$\sigma_8 \Omega_m^{0.5}$	0.4156	$0.407^{+0.031}_{-0.034}$	$100\theta_*$	1.040955	$1.04112^{+0.00031}_{-0.00028}$	$\chi^2_{\text{DR11CMASS}}$	2.42	$3.09 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.25}$	0.5583	$0.548^{+0.043}_{-0.047}$	$D_A/\text{Gpc}$	13.887	$14.04^{+0.31}_{-0.28}$	$\chi^2_{\text{DR11LOWZ}}$	0.44	$0.56 (\nu: 0.2)$
$\sigma_8/h^{0.5}$	0.910	$0.897^{+0.071}_{-0.077}$	$z_{\text{drag}}$	1059.93	$1059.6^{+4.1}_{-4.3}$	$\chi^2_{\text{CFHTLENS}}$	96.76	$98.7 (\nu: 1.8)$
$\langle d^2 \rangle^{1/2}$	2.240	$2.42^{+0.46}_{-0.39}$	$r_{\text{drag}}$	147.22	$148.9^{+3.6}_{-3.3}$	$\chi^2_{\text{prior}}$	0.03	$2.0 (\nu: 2.1)$
$z_{\text{re}}$	9.193	$9.11^{+0.47}_{-0.47}$	$k_D$	0.14073	$0.1391^{+0.0044}_{-0.0044}$	$\chi^2_{\text{BAO}}$	4.34	$5.4 (\nu: 1.0)$
$10^9 A_s$	1.75	$2.26^{+1.2}_{-0.88}$	$100\theta_D$	0.16074	$0.1609^{+0.0025}_{-0.0025}$			
$10^9 A_s e^{-2\tau}$	1.52	$1.97^{+1.0}_{-0.76}$	$z_{\text{eq}}$	3390	$3230^{+240}_{-290}$			

Best-fit  $\chi^2_{\text{eff}} = 101.75$ ;  $\bar{\chi}^2_{\text{eff}} = 107.16$ ;  $R - 1 = 0.00667$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMASS: 2.42 DR11LOWZ: 0.44 Hubble - H070p6: 0.62 WL - CFHTLENS\_6bin\_conservative: 96.76

## 7.70 base\_mnu\_CamSpecDS\_TT\_lowTEB

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02211^{+0.00052}_{-0.00054} \quad (-0.1\sigma)$	$H_0$	$65.0^{+4.7}_{-6.0} \quad (-0.2\sigma)$	$100\theta_*$	$1.04098^{+0.00095}_{-0.00098} \quad (+0.0\sigma)$
$\Omega_c h^2$	$0.1205^{+0.0046}_{-0.0045} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.652^{+0.068}_{-0.091} \quad (-0.2\sigma)$	$z_{\text{drag}}$	$1059.4^{+1.0}_{-0.97} \quad (-0.1\sigma)$
$100\theta_{\text{MC}}$	$1.0407^{+0.0010}_{-0.0011} \quad (-0.0\sigma)$	$\Omega_m$	$0.348^{+0.091}_{-0.068} \quad (+0.2\sigma)$	$r_{\text{drag}}$	$147.18^{+0.99}_{-1.0} \quad (-0.1\sigma)$
$\tau$	$0.077^{+0.039}_{-0.039} \quad (-0.2\sigma)$	$\Omega_m h^2$	$0.1457^{+0.0087}_{-0.0073} \quad (+0.2\sigma)$	$k_D$	$0.1406^{+0.0011}_{-0.0010} \quad (+0.1\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.812 \quad (+0.2\sigma)$	$\Omega_\nu h^2$	$< 0.00873 \quad (+0.2\sigma)$	$100\theta_D$	$0.16101^{+0.00054}_{-0.00054} \quad (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.088^{+0.075}_{-0.074} \quad (-0.2\sigma)$	$\Omega_m h^3$	$0.0946^{+0.0027}_{-0.0037} \quad (-0.2\sigma)$	$z_{\text{eq}}$	$3408^{+100}_{-100} \quad (+0.1\sigma)$
$n_s$	$0.964^{+0.013}_{-0.014} \quad (+0.0\sigma)$	$\sigma_8$	$0.782^{+0.083}_{-0.11} \quad (-0.3\sigma)$	$100\theta_{\text{eq}}$	$0.812^{+0.019}_{-0.019} \quad (-0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.028}_{-0.028} \quad (-0.2\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0699^{+0.0031}_{-0.0039} \quad (-0.2\sigma)$
$A_{100}^{\text{PS}}$	$282^{+40}_{-40} \quad (+0.8\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.599^{+0.046}_{-0.055} \quad (-0.3\sigma)$	$H(0.57)$	$91.7^{+2.2}_{-2.8} \quad (-0.2\sigma)$
$A_{143}^{\text{PS}}$	$48^{+10}_{-10} \quad (+0.3\sigma)$	$\sigma_8/h^{0.5}$	$0.970^{+0.079}_{-0.099} \quad (-0.3\sigma)$	$D_A(0.57)$	$1426^{+89}_{-68} \quad (+0.2\sigma)$
$A_{217}^{\text{PS}}$	$88^{+20}_{-20} \quad (-0.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.487^{+0.093}_{-0.092} \quad (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.685^{+0.021}_{-0.016} \quad (+0.2\sigma)$
$A_{217}^{\text{CIB}}$	$54^{+10}_{-10} \quad (-1.6\sigma)$	$z_{\text{re}}$	$9.9^{+3.7}_{-3.7} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.465^{+0.037}_{-0.047} \quad (-0.3\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.21 \quad (-1.1\sigma)$	$10^9 A_s$	$2.19^{+0.17}_{-0.16} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.576^{+0.070}_{-0.093} \quad (-0.3\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.55^{+0.20}_{-0.19}$	$10^9 A_s e^{-2\tau}$	$1.880^{+0.028}_{-0.028} \quad (-0.1\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24619^{+0.00023}_{-0.00024} \quad (-3.5\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1233^{+30}_{-29} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$33^{+6}_{-6} \quad (+0.8\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5706^{+80}_{-82} \quad (-0.2\sigma)$	$f_{2000}^{217}$	$108.7^{+4.1}_{-4.1} \quad (+1.0\sigma)$
$A_{100}^{\text{dust}}$	$0.97^{+0.38}_{-0.38}$	$D_{810}$	$2534^{+27}_{-27} \quad (+0.0\sigma)$	$f_{2000}^{143 \times 217}$	$36^{+4}_{-4} \quad (+1.2\sigma)$
$A_{143}^{\text{dust}}$	$1.07^{+0.36}_{-0.35}$	$D_{1420}$	$814.7^{+9.8}_{-9.8} \quad (+0.1\sigma)$	$\chi_{\text{lowTEB}}^2$	$10497.0 \quad (\nu: 2.7) \quad (-0.3\sigma)$
$A_{217}^{\text{dust}}$	$1.16^{+0.22}_{-0.22}$	$n_{s,0.002}$	$0.964^{+0.013}_{-0.014} \quad (+0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8156.0 \quad (\nu: 17.5)$
$A_{143 \times 217}^{\text{dust}}$	$0.97^{+0.34}_{-0.35}$	$Y_{\text{P}}$	$0.24486^{+0.00023}_{-0.00024} \quad (-3.5\sigma)$	$\chi_{\text{prior}}^2$	$7.4 \quad (\nu: 5.4) \quad (-0.0\sigma)$
$c_{100}$	$0.9984^{+0.0019}_{-0.0018} \quad (+0.6\sigma)$	$\text{Age/Gyr}$	$13.94^{+0.33}_{-0.25} \quad (+0.2\sigma)$	$\chi_{\text{CMB}}^2$	$18653.0 \quad (\nu: 17.4) \quad (+1252.8\sigma)$
$c_{217}$	$0.9994^{+0.0035}_{-0.0035} \quad (+2.4\sigma)$	$z_*$	$1090.3^{+1.1}_{-1.1} \quad (+0.1\sigma)$		
$\beta_1^1$	$0.0^{+1.9}_{-2.0}$	$r_*$	$144.4^{+1.0}_{-1.1} \quad (-0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18660.37; \Delta\bar{\chi}_{\text{eff}}^2 = 7376.73; R - 1 = 0.00823$$

## 7.71 base\_mnu\_plikDS\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02232	$0.02214^{+0.00050}_{-0.00053}$ (+0.0 $\sigma$ )	$\Omega_m$	0.306	$0.344^{+0.089}_{-0.066}$ (+0.1 $\sigma$ )	$100\theta_*$	1.04110	$1.04094^{+0.00093}_{-0.00093}$ (-0.1 $\sigma$ )
$\Omega_c h^2$	0.11944	$0.1205^{+0.0047}_{-0.0045}$ (+0.1 $\sigma$ )	$\Omega_m h^2$	0.1418	$0.1455^{+0.0086}_{-0.0072}$ (+0.2 $\sigma$ )	$D_A/\text{Gpc}$	13.891	$13.874^{+0.095}_{-0.10}$ (-0.1 $\sigma$ )
$100\theta_{\text{MC}}$	1.04095	$1.0406^{+0.0010}_{-0.0010}$ (-0.1 $\sigma$ )	$\Omega_\nu h^2$	0.00002	< 0.00841 (+0.1 $\sigma$ )	$z_{\text{drag}}$	1059.78	$1059.48^{+0.95}_{-0.99}$ (+0.1 $\sigma$ )
$\tau$	0.0757	$0.077^{+0.039}_{-0.037}$ (-0.2 $\sigma$ )	$\Omega_m h^3$	0.09645	$0.0948^{+0.0026}_{-0.0036}$ (-0.1 $\sigma$ )	$r_{\text{drag}}$	147.30	$147.2^{+1.0}_{-1.1}$ (-0.2 $\sigma$ )
$\Sigma m_\nu [\text{eV}]$	0.002	< 0.783 (+0.1 $\sigma$ )	$\sigma_8$	0.840	$0.787^{+0.079}_{-0.11}$ (-0.2 $\sigma$ )	$k_D$	0.14060	$0.1407^{+0.0011}_{-0.0011}$ (+0.2 $\sigma$ )
$\ln(10^{10} A_s)$	3.085	$3.089^{+0.075}_{-0.072}$ (-0.2 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4650	$0.460^{+0.028}_{-0.028}$ (-0.1 $\sigma$ )	$100\theta_D$	0.16085	$0.16098^{+0.00055}_{-0.00052}$ (-0.1 $\sigma$ )
$n_s$	0.9670	$0.963^{+0.014}_{-0.014}$ (-0.1 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.625	$0.602^{+0.045}_{-0.055}$ (-0.2 $\sigma$ )	$z_{\text{eq}}$	3388	$3408^{+100}_{-100}$ (+0.1 $\sigma$ )
$y_{\text{cal}}$	1.00026	$1.0004^{+0.0050}_{-0.0050}$ (+0.0 $\sigma$ )	$\sigma_8/h^{0.5}$	1.018	$0.974^{+0.077}_{-0.098}$ (-0.2 $\sigma$ )	$k_{\text{eq}}$	0.010339	$0.01040^{+0.00032}_{-0.00031}$ (+0.1 $\sigma$ )
$A_{217}^{\text{CIB}}$	69.3	$68^{+10}_{-10}$ (+0.6 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.495	$2.492^{+0.093}_{-0.091}$ (-0.1 $\sigma$ )	$100\theta_{\text{eq}}$	0.8157	$0.812^{+0.019}_{-0.019}$ (-0.1 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.11	—	$z_{\text{re}}$	9.74	$9.9^{+3.4}_{-3.7}$ (-0.2 $\sigma$ )	$100\theta_{\text{s,eq}}$	0.4507	$0.4488^{+0.0098}_{-0.0097}$ (-0.1 $\sigma$ )
$A_{143}^{\text{tSZ}}$	6.74	$4.6^{+3.7}_{-3.9}$ (-0.2 $\sigma$ )	$10^9 A_s$	2.187	$2.20^{+0.17}_{-0.15}$ (-0.2 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07185	$0.0701^{+0.0031}_{-0.0038}$ (-0.1 $\sigma$ )
$A_{100}^{\text{PS}}$	275	$285^{+50}_{-50}$ (+0.9 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.8796	$1.882^{+0.028}_{-0.027}$ (+0.1 $\sigma$ )	$H(0.57)$	93.26	$91.9^{+2.1}_{-2.8}$ (-0.1 $\sigma$ )
$A_{143}^{\text{PS}}$	44.8	$50^{+10}_{-10}$ (+0.6 $\sigma$ )	$D_{40}$	1233.2	$1237^{+30}_{-30}$ (-0.0 $\sigma$ )	$D_A(0.57)$	1381	$1422^{+89}_{-66}$ (+0.1 $\sigma$ )
$A_{143 \times 217}^{\text{PS}}$	37.1	$41^{+20}_{-20}$ (+0.1 $\sigma$ )	$D_{220}$	5721	$5719^{+81}_{-79}$ (+0.1 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6747	$0.684^{+0.021}_{-0.016}$ (+0.1 $\sigma$ )
$A_{217}^{\text{PS}}$	95.2	$93^{+20}_{-20}$ (-0.4 $\sigma$ )	$D_{810}$	2534.9	$2536^{+27}_{-27}$ (+0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4859	$0.467^{+0.036}_{-0.047}$ (-0.2 $\sigma$ )
$A^{\text{kSZ}}$	0.0	—	$D_{1420}$	815.6	$814.6^{+9.8}_{-9.8}$ (+0.1 $\sigma$ )	$\sigma_8(0.57)$	0.626	$0.580^{+0.067}_{-0.093}$ (-0.2 $\sigma$ )
$A_{100}^{\text{dustTT}}$	7.30	$7.4^{+3.7}_{-3.7}$ (-0.0 $\sigma$ )	$D_{2000}$	230.90	$229.8^{+3.8}_{-3.9}$ (+0.0 $\sigma$ )	$f_{2000}^{143}$	32.2	$34^{+6}_{-5}$ (+1.0 $\sigma$ )
$A_{143}^{\text{dustTT}}$	9.12	$9.1^{+3.6}_{-3.6}$ (+0.0 $\sigma$ )	$n_{\text{s},0.002}$	0.9670	$0.963^{+0.014}_{-0.014}$ (-0.1 $\sigma$ )	$f_{2000}^{143 \times 217}$	32.48	$34^{+4}_{-4}$ (+0.3 $\sigma$ )
$A_{143 \times 217}^{\text{dustTT}}$	17.9	$17.4^{+8.1}_{-8.1}$ (+0.0 $\sigma$ )	$Y_{\text{P}}$	0.245371	$0.24529^{+0.00024}_{-0.00024}$ (+0.0 $\sigma$ )	$f_{2000}^{217}$	113.32	$114.5^{+4.1}_{-3.9}$ (+3.6 $\sigma$ )
$A_{217}^{\text{dustTT}}$	81.1	$81^{+10}_{-10}$ (-0.2 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246697	$0.24661^{+0.00024}_{-0.00024}$ (+0.0 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10496.12	$10497.4 (\nu: 2.9)$ (-0.1 $\sigma$ )
$c_{100}$	0.99794	$0.9979^{+0.0015}_{-0.0015}$ (+0.0 $\sigma$ )	$10^5 \text{D/H}$	2.601	$2.63^{+0.10}_{-0.10}$ (-0.0 $\sigma$ )	$\chi_{\text{plik}}^2$	747.8	$762.7 (\nu: 17.0)$ (-2.6 $\sigma$ )
$c_{217}$	0.99626	$0.9964^{+0.0028}_{-0.0028}$ (+0.3 $\sigma$ )	Age/Gyr	13.771	$13.93^{+0.33}_{-0.23}$ (+0.1 $\sigma$ )	$\chi_{\text{prior}}^2$	1.9	$7.3 (\nu: 6.3)$ (-0.0 $\sigma$ )
$H_0$	68.0	$65.2^{+4.5}_{-5.9}$ (-0.1 $\sigma$ )	$z_*$	1089.93	$1090.3^{+1.1}_{-1.1}$ (+0.0 $\sigma$ )	$\chi_{\text{CMB}}^2$	11243.9	$11260.1 (\nu: 16.8)$ (-2.7 $\sigma$ )
$\Omega_\Lambda$	0.694	$0.656^{+0.066}_{-0.089}$ (-0.1 $\sigma$ )	$r_*$	144.62	$144.4^{+1.0}_{-1.1}$ (-0.1 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 11245.77$ ;  $\Delta\chi_{\text{eff}}^2 = -15.77$ ;  $\bar{\chi}_{\text{eff}}^2 = 11267.42$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = -16.22$ ;  $R - 1 = 0.01142$   
 $\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.12 ( $\Delta$  -0.40) plik\_dx11dr2\_DS.v18\_TT: 747.78

## 7.72 base\_mnu\_plikHM\_TT\_WMAPTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02224	$0.02211^{+0.00049}_{-0.00052}$	$\Omega_m$	0.309	$0.340^{+0.082}_{-0.060}$	$100\theta_*$	1.04104	$1.04093^{+0.00093}_{-0.00095}$
$\Omega_c h^2$	0.11983	$0.1205^{+0.0045}_{-0.0044}$	$\Omega_m h^2$	0.1421	$0.1451^{+0.0081}_{-0.0068}$	$D_A/\text{Gpc}$	13.888	$13.877^{+0.094}_{-0.096}$
$100\theta_{\text{MC}}$	1.04087	$1.0406^{+0.0010}_{-0.0010}$	$\Omega_\nu h^2$	0.00002	$< 0.00753$	$z_{\text{drag}}$	1059.63	$1059.40^{+0.95}_{-0.99}$
$\tau$	0.0728	$0.075^{+0.024}_{-0.023}$	$\Omega_m h^3$	0.09634	$0.0949^{+0.0024}_{-0.0035}$	$r_{\text{drag}}$	147.29	$147.2^{+1.0}_{-1.0}$
$\Sigma m_\nu [\text{eV}]$	0.002	$< 0.701$	$\sigma_8$	0.839	$0.794^{+0.071}_{-0.10}$	$k_D$	0.14056	$0.1406^{+0.0011}_{-0.0011}$
$\ln(10^{10} A_s)$	3.0797	$3.084^{+0.047}_{-0.044}$	$\sigma_8 \Omega_m^{0.5}$	0.4664	$0.461^{+0.028}_{-0.029}$	$100\theta_D$	0.16094	$0.16103^{+0.00054}_{-0.00053}$
$n_s$	0.9657	$0.963^{+0.013}_{-0.013}$	$\sigma_8 \Omega_m^{0.25}$	0.6255	$0.605^{+0.043}_{-0.053}$	$z_{\text{eq}}$	3395	$3408^{+100}_{-100}$
$y_{\text{cal}}$	1.00020	$1.0005^{+0.0049}_{-0.0049}$	$\sigma_8/h^{0.5}$	1.019	$0.980^{+0.071}_{-0.094}$	$k_{\text{eq}}$	0.010362	$0.01041^{+0.00031}_{-0.00031}$
$A_{217}^{\text{CIB}}$	66.5	$64^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.496	$2.490^{+0.080}_{-0.080}$	$100\theta_{\text{eq}}$	0.8141	$0.812^{+0.019}_{-0.018}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.05	—	$z_{\text{re}}$	9.50	$9.7^{+2.1}_{-2.1}$	$100\theta_{\text{s,eq}}$	0.4499	$0.4487^{+0.0097}_{-0.0094}$
$A_{143}^{\text{tSZ}}$	7.19	$4.9^{+3.7}_{-3.8}$	$10^9 A_s$	2.175	$2.19^{+0.10}_{-0.10}$	$r_{\text{drag}}/D_V(0.57)$	0.07170	$0.0702^{+0.0029}_{-0.0036}$
$A_{100}^{\text{PS}}$	252	$261^{+50}_{-50}$	$10^9 A_s e^{-2\tau}$	1.8804	$1.883^{+0.026}_{-0.027}$	$H(0.57)$	93.15	$92.0^{+2.0}_{-2.7}$
$A_{143}^{\text{PS}}$	39.1	$45^{+20}_{-20}$	$D_{40}$	1234.1	$1237^{+29}_{-31}$	$D_A(0.57)$	1385	$1418^{+83}_{-61}$
$A_{143 \times 217}^{\text{PS}}$	34	$40^{+20}_{-20}$	$D_{220}$	5714	$5716^{+81}_{-82}$	$F_{\text{AP}}(0.57)$	0.6754	$0.683^{+0.019}_{-0.015}$
$A_{217}^{\text{PS}}$	98.1	$97^{+20}_{-20}$	$D_{810}$	2533.9	$2536^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4860	$0.469^{+0.033}_{-0.045}$
$A^{\text{kSZ}}$	0.0	—	$D_{1420}$	814.6	$814^{+10}_{-10}$	$\sigma_8(0.57)$	0.624	$0.585^{+0.059}_{-0.088}$
$A_{100}^{\text{dustTT}}$	7.43	$7.5^{+3.7}_{-3.7}$	$D_{2000}$	230.43	$229.7^{+3.8}_{-4.0}$	$f_{2000}^{143}$	29.4	$31^{+6}_{-6}$
$A_{143}^{\text{dustTT}}$	9.00	$9.0^{+3.6}_{-3.6}$	$n_{\text{s},0.002}$	0.9657	$0.963^{+0.013}_{-0.013}$	$f_{2000}^{143 \times 217}$	32.16	$33^{+5}_{-4}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.2^{+8.2}_{-8.3}$	$Y_{\text{P}}$	0.245337	$0.24527^{+0.00022}_{-0.00024}$	$f_{2000}^{217}$	105.78	$106.8^{+4.3}_{-4.0}$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	0.246663	$0.24660^{+0.00022}_{-0.00024}$	$\chi_{\text{WMAPTEB}}^2$	19734.25	$19735.4 (\nu: 2.6)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	$10^5 \text{D/H}$	2.615	$2.64^{+0.10}_{-0.093}$	$\chi_{\text{plik}}^2$	763.4	$779.0 (\nu: 17.8)$
$c_{217}$	0.99588	$0.9960^{+0.0028}_{-0.0028}$	$\text{Age/Gyr}$	13.782	$13.91^{+0.31}_{-0.22}$	$\chi_{\text{prior}}^2$	2.1	$7.4 (\nu: 6.4)$
$H_0$	67.80	$65.5^{+4.2}_{-5.6}$	$z_*$	1090.06	$1090.3^{+1.1}_{-1.0}$	$\chi_{\text{CMB}}^2$	20497.7	$20514.4 (\nu: 17.5)$
$\Omega_\Lambda$	0.691	$0.660^{+0.060}_{-0.082}$	$r_*$	144.58	$144.4^{+1.0}_{-1.1}$			

Best-fit  $\chi_{\text{eff}}^2 = 20499.74$ ;  $\bar{\chi}_{\text{eff}}^2 = 20521.79$ ;  $R - 1 = 0.00732$

$\chi_{\text{eff}}^2$ : CMB - bflike-WMAP353ggf\_LFI312\_nw8: 19734.25 plik\_dx11dr2\_HM\_v18\_TT: 763.42

### 7.73 base\_mnu\_plikHM\_TT\_WMAPTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02210^{+0.00051}_{-0.00053}$	$\Omega_m$	$0.344^{+0.076}_{-0.064}$	$100\theta_*$	$1.04100^{+0.00092}_{-0.00095}$
$\Omega_c h^2$	$0.1200^{+0.0047}_{-0.0045}$	$\Omega_m h^2$	$0.1452^{+0.0079}_{-0.0072}$	$D_A/\text{Gpc}$	$13.888^{+0.094}_{-0.10}$
$100\theta_{\text{MC}}$	$1.0407^{+0.0010}_{-0.0011}$	$\Omega_\nu h^2$	$< 0.00707$	$z_{\text{drag}}$	$1059.35^{+0.98}_{-0.98}$
$\tau$	$0.073^{+0.023}_{-0.023}$	$\Omega_m h^3$	$0.0945^{+0.0024}_{-0.0028}$	$r_{\text{drag}}$	$147.33^{+0.99}_{-1.1}$
$\Sigma m_\nu [\text{eV}]$	$< 0.657$	$\sigma_8$	$0.777^{+0.063}_{-0.073}$	$k_D$	$0.1404^{+0.0011}_{-0.0011}$
$\ln(10^{10} A_s)$	$3.079^{+0.044}_{-0.042}$	$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.018}_{-0.017}$	$100\theta_D$	$0.16107^{+0.00056}_{-0.00053}$
$n_s$	$0.964^{+0.013}_{-0.014}$	$\sigma_8 \Omega_m^{0.25}$	$0.593^{+0.027}_{-0.031}$	$z_{\text{eq}}$	$3396^{+100}_{-100}$
$y_{\text{cal}}$	$1.0003^{+0.0051}_{-0.0049}$	$\sigma_8/h^{0.5}$	$0.962^{+0.051}_{-0.058}$	$k_{\text{eq}}$	$0.01037^{+0.00032}_{-0.00031}$
$A_{217}^{\text{CIB}}$	$65^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	$2.469^{+0.066}_{-0.059}$	$100\theta_{\text{eq}}$	$0.814^{+0.019}_{-0.019}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$z_{\text{re}}$	$9.6^{+2.1}_{-2.1}$	$100\theta_{\text{s,eq}}$	$0.4500^{+0.0098}_{-0.0095}$
$A_{143}^{\text{tSZ}}$	$4.9^{+3.8}_{-3.9}$	$10^9 A_s$	$2.175^{+0.098}_{-0.090}$	$r_{\text{drag}}/D_V(0.57)$	$0.0701^{+0.0031}_{-0.0034}$
$A_{100}^{\text{PS}}$	$263^{+50}_{-50}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.026}_{-0.026}$	$H(0.57)$	$91.8^{+2.2}_{-2.4}$
$A_{143}^{\text{PS}}$	$46^{+20}_{-20}$	$D_{40}$	$1232^{+26}_{-27}$	$D_A(0.57)$	$1423^{+75}_{-66}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$D_{220}$	$5714^{+81}_{-83}$	$F_{\text{AP}}(0.57)$	$0.684^{+0.018}_{-0.016}$
$A_{217}^{\text{PS}}$	$97^{+20}_{-20}$	$D_{810}$	$2534^{+28}_{-27}$	$f\sigma_8(0.57)$	$0.461^{+0.023}_{-0.028}$
$A^{\text{kSZ}}$	—	$D_{1420}$	$814^{+11}_{-10}$	$\sigma_8(0.57)$	$0.572^{+0.057}_{-0.066}$
$A_{100}^{\text{dustTT}}$	$7.5^{+3.7}_{-3.7}$	$D_{2000}$	$229.4^{+3.9}_{-3.9}$	$f_{2000}^{143}$	$31^{+6}_{-6}$
$A_{143}^{\text{dustTT}}$	$9.0^{+3.7}_{-3.6}$	$n_{\text{s},0.002}$	$0.964^{+0.013}_{-0.014}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.2^{+8.1}_{-8.2}$	$Y_{\text{P}}$	$0.24527^{+0.00023}_{-0.00024}$	$f_{2000}^{217}$	$107.0^{+4.2}_{-4.1}$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24660^{+0.00023}_{-0.00025}$	$\chi_{\text{lensing}}^2$	$9.5 (\nu: 0.9)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$10^5 \text{D}/\text{H}$	$2.64^{+0.10}_{-0.097}$	$\chi_{\text{WMAPTEB}}^2$	$19734.7 (\nu: 1.8)$
$c_{217}$	$0.9960^{+0.0028}_{-0.0029}$	$\text{Age}/\text{Gyr}$	$13.94^{+0.27}_{-0.23}$	$\chi_{\text{plik}}^2$	$780.1 (\nu: 15.6)$
$H_0$	$65.2^{+4.6}_{-5.1}$	$z_*$	$1090.3^{+1.1}_{-1.1}$	$\chi_{\text{prior}}^2$	$7.5 (\nu: 6.4)$
$\Omega_\Lambda$	$0.656^{+0.064}_{-0.076}$	$r_*$	$144.6^{+1.0}_{-1.1}$	$\chi_{\text{CMB}}^2$	$20524.2 (\nu: 16.3)$

$$\bar{\chi}_{\text{eff}}^2 = 20531.70; R - 1 = 0.01261$$

## 7.74 base\_mnu\_plikHM\_TT\_WMAPTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02226^{+0.00040}_{-0.00038}$	$\Omega_\nu h^2$	$< 0.00209$	$k_D$	$0.14036^{+0.00091}_{-0.00095}$
$\Omega_c h^2$	$0.1189^{+0.0027}_{-0.0028}$	$\Omega_m h^3$	$0.0959^{+0.0012}_{-0.0012}$	$100\theta_D$	$0.16095^{+0.00052}_{-0.00050}$
$100\theta_{MC}$	$1.04095^{+0.00082}_{-0.00084}$	$\sigma_8$	$0.823^{+0.034}_{-0.038}$	$z_{eq}$	$3374^{+63}_{-65}$
$\tau$	$0.076^{+0.023}_{-0.023}$	$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.020}_{-0.022}$	$k_{eq}$	$0.01030^{+0.00019}_{-0.00020}$
$\Sigma m_\nu$ [eV]	$< 0.195$	$\sigma_8 \Omega_m^{0.25}$	$0.615^{+0.025}_{-0.027}$	$100\theta_{eq}$	$0.818^{+0.012}_{-0.011}$
$\ln(10^{10} A_s)$	$3.085^{+0.046}_{-0.045}$	$\sigma_8/h^{0.5}$	$1.001^{+0.040}_{-0.043}$	$100\theta_{s,eq}$	$0.4520^{+0.0063}_{-0.0059}$
$n_s$	$0.9671^{+0.0089}_{-0.0088}$	$\langle d^2 \rangle^{1/2}$	$2.479^{+0.068}_{-0.071}$	$r_{drag}/D_V(0.57)$	$0.07161^{+0.00085}_{-0.00087}$
$y_{cal}$	$1.0005^{+0.0047}_{-0.0049}$	$z_{re}$	$9.8^{+2.0}_{-2.1}$	$H(0.57)$	$92.96^{+0.67}_{-0.70}$
$A_{217}^{CIB}$	$64^{+10}_{-10}$	$10^9 A_s$	$2.19^{+0.10}_{-0.096}$	$D_A(0.57)$	$1389^{+18}_{-16}$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.878^{+0.023}_{-0.023}$	$F_{AP}(0.57)$	$0.6760^{+0.0041}_{-0.0039}$
$A_{143}^{tSZ}$	$5.1^{+3.7}_{-3.8}$	$D_{40}$	$1233^{+26}_{-27}$	$f\sigma_8(0.57)$	$0.479^{+0.018}_{-0.019}$
$A_{100}^{PS}$	$258^{+50}_{-60}$	$D_{220}$	$5723^{+79}_{-83}$	$\sigma_8(0.57)$	$0.612^{+0.025}_{-0.028}$
$A_{143}^{PS}$	$43^{+20}_{-20}$	$D_{810}$	$2535^{+26}_{-28}$	$f_{2000}^{143}$	$30^{+6}_{-6}$
$A_{143 \times 217}^{PS}$	$39^{+20}_{-20}$	$D_{1420}$	$815^{+10}_{-10}$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$
$A_{217}^{PS}$	$97^{+20}_{-20}$	$D_{2000}$	$230.4^{+3.5}_{-3.5}$	$f_{2000}^{217}$	$106.0^{+3.8}_{-3.7}$
$A^{kSZ}$	—	$n_{s,0.002}$	$0.9671^{+0.0089}_{-0.0088}$	$\chi^2_{WMAPTEB}$	$19735.1 (\nu: 2.3)$
$A_{100}^{dustTT}$	$7.5^{+3.7}_{-3.6}$	$Y_P$	$0.24534^{+0.00018}_{-0.00018}$	$\chi^2_{plik}$	$778 (\nu: 50.1)$
$A_{143}^{dustTT}$	$9.0^{+3.6}_{-3.5}$	$Y_P^{BBN}$	$0.24667^{+0.00018}_{-0.00018}$	$\chi^2_{6DF}$	$0.074 (\nu: 0.0)$
$A_{143 \times 217}^{dustTT}$	$17.1^{+8.2}_{-8.2}$	$10^5 D/H$	$2.612^{+0.074}_{-0.074}$	$\chi^2_{MGS}$	$1.29 (\nu: 0.2)$
$A_{217}^{dustTT}$	$82^{+10}_{-10}$	$Age/Gyr$	$13.808^{+0.079}_{-0.076}$	$\chi^2_{DR11CMass}$	$2.97 (\nu: 0.3)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	$1089.97^{+0.59}_{-0.59}$	$\chi^2_{DR11LOWZ}$	$0.84 (\nu: 0.2)$
$c_{217}$	$0.9959^{+0.0028}_{-0.0028}$	$r_*$	$144.79^{+0.69}_{-0.69}$	$\chi^2_{prior}$	$7.3 (\nu: 6.2)$
$H_0$	$67.5^{+1.2}_{-1.3}$	$100\theta_*$	$1.04115^{+0.00082}_{-0.00084}$	$\chi^2_{CMB}$	$20510 (\nu: 50.6)$
$\Omega_\Lambda$	$0.689^{+0.015}_{-0.016}$	$D_A/Gpc$	$13.907^{+0.068}_{-0.066}$	$\chi^2_{BAO}$	$5.2 (\nu: 0.7)$
$\Omega_m$	$0.311^{+0.016}_{-0.015}$	$z_{drag}$	$1059.61^{+0.90}_{-0.92}$		
$\Omega_m h^2$	$0.1420^{+0.0024}_{-0.0024}$	$r_{drag}$	$147.50^{+0.76}_{-0.73}$		

$$\bar{\chi}^2_{eff} = 20525.59; R - 1 = 0.01723$$

## 8 mnu+Alens

### 8.1 base\_mnu\_Alens\_plikHM\_TT\_lowTEB\_lensing\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022407	$0.02238^{+0.00045}_{-0.00042}$	$\Omega_m$	0.3115	$0.312^{+0.018}_{-0.017}$	$D_A/\text{Gpc}$	13.947	$13.947^{+0.076}_{-0.075}$
$\Omega_c h^2$	0.11664	$0.1167^{+0.0036}_{-0.0038}$	$\Omega_m h^2$	0.14133	$0.1413^{+0.0025}_{-0.0024}$	$z_{\text{drag}}$	1059.78	$1059.73^{+0.94}_{-0.89}$
$100\theta_{\text{MC}}$	1.04124	$1.04124^{+0.00088}_{-0.00090}$	$\Omega_\nu h^2$	0.00229	$< 0.00444$	$r_{\text{drag}}$	147.93	$147.94^{+0.83}_{-0.80}$
$\tau$	0.0602	$0.060^{+0.041}_{-0.041}$	$\Omega_m h^3$	0.09519	$0.0952^{+0.0015}_{-0.0016}$	$k_D$	0.14003	$0.14000^{+0.00091}_{-0.00091}$
$\Sigma m_\nu [\text{eV}]$	0.213	$< 0.413$	$\sigma_8$	0.770	$0.772^{+0.067}_{-0.069}$	$100\theta_D$	0.16086	$0.16089^{+0.00051}_{-0.00053}$
$A_L$	1.091	$1.09^{+0.15}_{-0.15}$	$\sigma_8 \Omega_m^{0.5}$	0.4295	$0.430^{+0.035}_{-0.037}$	$z_{\text{eq}}$	3323	$3324^{+82}_{-85}$
$\ln(10^{10} A_s)$	3.046	$3.046^{+0.083}_{-0.081}$	$\sigma_8 \Omega_m^{0.25}$	0.5750	$0.576^{+0.049}_{-0.050}$	$k_{\text{eq}}$	0.010142	$0.01014^{+0.00025}_{-0.00026}$
$n_s$	0.9727	$0.972^{+0.011}_{-0.011}$	$\sigma_8/h^{0.5}$	0.938	$0.940^{+0.079}_{-0.080}$	$100\theta_{\text{eq}}$	0.8283	$0.828^{+0.017}_{-0.016}$
$y_{\text{cal}}$	0.9999	$1.0000^{+0.0050}_{-0.0050}$	$\langle d^2 \rangle^{1/2}$	2.482	$2.480^{+0.075}_{-0.071}$	$100\theta_{s,\text{eq}}$	0.4572	$0.4572^{+0.0089}_{-0.0082}$
$A_{217}^{\text{CIB}}$	66.8	$64^{+10}_{-10}$	$z_{\text{re}}$	8.22	$8.1^{+4.1}_{-4.4}$	$r_{\text{drag}}/D_V(0.57)$	0.07162	$0.07164^{+0.00098}_{-0.00096}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.103	$2.11^{+0.17}_{-0.18}$	$H(0.57)$	92.70	$92.71^{+0.83}_{-0.88}$
$A_{143}^{\text{tSZ}}$	7.26	$5.2^{+3.7}_{-3.9}$	$10^9 A_s e^{-2\tau}$	1.8643	$1.865^{+0.026}_{-0.027}$	$D_A(0.57)$	1392.5	$1392^{+22}_{-21}$
$A_{100}^{\text{PS}}$	252	$258^{+50}_{-50}$	$D_{40}$	1210.4	$1212^{+33}_{-35}$	$F_{\text{AP}}(0.57)$	0.67603	$0.6760^{+0.0045}_{-0.0044}$
$A_{143}^{\text{PS}}$	36.9	$43^{+20}_{-20}$	$D_{220}$	5723	$5725^{+80}_{-79}$	$f\sigma_8(0.57)$	0.4502	$0.451^{+0.036}_{-0.036}$
$A_{143 \times 217}^{\text{PS}}$	31	$38^{+20}_{-20}$	$D_{810}$	2528.8	$2529^{+28}_{-28}$	$\sigma_8(0.57)$	0.574	$0.575^{+0.050}_{-0.051}$
$A_{217}^{\text{PS}}$	96.8	$96^{+20}_{-20}$	$D_{1420}$	815.1	$815^{+10}_{-10}$	$\chi^2_{\text{lensing}}$	9.53	$10.3 (\nu: 2.2)$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.74	$230.5^{+3.5}_{-3.6}$	$\chi^2_{\text{lowTEB}}$	10493.50	$10494.7 (\nu: 1.5)$
$A_{100}^{\text{dustTT}}$	7.44	$7.5^{+3.6}_{-3.6}$	$n_{s,0.002}$	0.9727	$0.972^{+0.011}_{-0.011}$	$\chi^2_{\text{plik}}$	766.7	$780.1 (\nu: 16.5)$
$A_{143}^{\text{dustTT}}$	9.18	$9.1^{+3.6}_{-3.6}$	$Y_P$	0.245409	$0.24540^{+0.00020}_{-0.00020}$	$\chi^2_{6\text{DF}}$	0.030	$0.08 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.4	$17.1^{+8.0}_{-8.2}$	$Y_P^{\text{BBN}}$	0.246735	$0.24672^{+0.00020}_{-0.00020}$	$\chi^2_{\text{MGS}}$	1.22	$1.31 (\nu: 0.2)$
$A_{217}^{\text{dustTT}}$	81.5	$82^{+10}_{-10}$	$10^5 D/H$	2.584	$2.590^{+0.081}_{-0.083}$	$\chi^2_{\text{DR11CMass}}$	2.46	$3.05 (\nu: 0.4)$
$c_{100}$	0.99796	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.845	$13.84^{+0.10}_{-0.10}$	$\chi^2_{\text{DR11LOWZ}}$	0.68	$0.85 (\nu: 0.3)$
$c_{217}$	0.99584	$0.9959^{+0.0028}_{-0.0028}$	$z_*$	1089.60	$1089.64^{+0.74}_{-0.74}$	$\chi^2_{\text{prior}}$	2.0	$7.4 (\nu: 6.3)$
$H_0$	67.35	$67.4^{+1.5}_{-1.5}$	$r_*$	145.26	$145.26^{+0.82}_{-0.80}$	$\chi^2_{\text{CMB}}$	11269.7	$11285.2 (\nu: 16.2)$
$\Omega_\Lambda$	0.6885	$0.688^{+0.017}_{-0.018}$	$100\theta_*$	1.04150	$1.04150^{+0.00090}_{-0.00092}$	$\chi^2_{\text{BAO}}$	4.38	$5.3 (\nu: 1.0)$

Best-fit  $\chi^2_{\text{eff}} = 11276.09$ ;  $\bar{\chi}^2_{\text{eff}} = 11297.84$ ;  $R - 1 = 0.00467$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.03 MGS: 1.22 DR11CMass: 2.46 DR11LOWZ: 0.68 CMB - smica\_g30\_ftl\_full\_pp: 9.53 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.50 plik\_dx11dr2\_HM\_v18\_TT: 766.67

## 9 mnu+omegak

### 9.1 base\_mnu\_omegak\_plikHM\_TT\_lowTEB\_lensing\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022282	$0.02223^{+0.00048}_{-0.00049}$	$\Omega_m$	0.3090	$0.312^{+0.020}_{-0.018}$	$D_A/\text{Gpc}$	13.915	$13.911^{+0.090}_{-0.093}$
$\Omega_c h^2$	0.11851	$0.1188^{+0.0047}_{-0.0044}$	$\Omega_m h^2$	0.1418	$0.1426^{+0.0055}_{-0.0052}$	$z_{\text{drag}}$	1059.63	$1059.52^{+0.96}_{-0.95}$
$100\theta_{\text{MC}}$	1.04100	$1.04095^{+0.00099}_{-0.00099}$	$\Omega_\nu h^2$	0.00102	$< 0.00396$	$r_{\text{drag}}$	147.58	$147.56^{+0.95}_{-0.99}$
$\tau$	0.0690	$0.074^{+0.037}_{-0.036}$	$\Omega_m h^3$	0.09607	$0.0964^{+0.0040}_{-0.0039}$	$k_D$	0.14028	$0.1403^{+0.0010}_{-0.0010}$
$\Omega_K$	0.0003	$0.0014^{+0.0069}_{-0.0065}$	$\sigma_8$	0.8117	$0.804^{+0.031}_{-0.035}$	$100\theta_D$	0.16094	$0.16100^{+0.00054}_{-0.00054}$
$\Sigma m_\nu [\text{eV}]$	0.095	$< 0.368$	$\sigma_8 \Omega_m^{0.5}$	0.4512	$0.449^{+0.014}_{-0.015}$	$z_{\text{eq}}$	3365	$3370^{+100}_{-98}$
$\ln(10^{10} A_s)$	3.068	$3.080^{+0.072}_{-0.068}$	$\sigma_8 \Omega_m^{0.25}$	0.6052	$0.601^{+0.020}_{-0.021}$	$k_{\text{eq}}$	0.010269	$0.01028^{+0.00032}_{-0.00030}$
$n_s$	0.9684	$0.967^{+0.013}_{-0.012}$	$\sigma_8/h^{0.5}$	0.9862	$0.978^{+0.034}_{-0.038}$	$100\theta_{\text{eq}}$	0.8199	$0.819^{+0.019}_{-0.020}$
$y_{\text{cal}}$	1.00017	$1.0004^{+0.0050}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.446	$2.451^{+0.054}_{-0.052}$	$100\theta_{s,\text{eq}}$	0.4529	$0.4525^{+0.0099}_{-0.010}$
$A_{217}^{\text{CIB}}$	67.5	$65^{+10}_{-10}$	$z_{\text{re}}$	9.12	$9.6^{+3.4}_{-3.3}$	$r_{\text{drag}}/D_V(0.57)$	0.07178	$0.0718^{+0.0011}_{-0.0010}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.151	$2.18^{+0.16}_{-0.15}$	$H(0.57)$	93.07	$93.1^{+1.5}_{-1.4}$
$A_{143}^{\text{tSZ}}$	7.27	$5.0^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8735	$1.875^{+0.029}_{-0.026}$	$D_A(0.57)$	1385.7	$1387^{+24}_{-24}$
$A_{100}^{\text{PS}}$	254	$261^{+50}_{-50}$	$D_{40}$	1225.0	$1230^{+31}_{-30}$	$F_{\text{AP}}(0.57)$	0.6754	$0.6764^{+0.0056}_{-0.0048}$
$A_{143}^{\text{PS}}$	38.8	$44^{+20}_{-20}$	$D_{220}$	5714	$5718^{+85}_{-81}$	$f\sigma_8(0.57)$	0.4720	$0.469^{+0.014}_{-0.015}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$D_{810}$	2533.0	$2533^{+29}_{-26}$	$\sigma_8(0.57)$	0.6047	$0.599^{+0.025}_{-0.028}$
$A_{217}^{\text{PS}}$	96.8	$97^{+20}_{-20}$	$D_{1420}$	815.1	$815^{+10}_{-9.9}$	$\chi^2_{\text{lensing}}$	9.13	$9.6 (\nu: 0.9)$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.35	$230.0^{+3.7}_{-3.7}$	$\chi^2_{\text{lowTEB}}$	10494.95	$10496.4 (\nu: 2.5)$
$A_{100}^{\text{dustTT}}$	7.34	$7.5^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9684	$0.967^{+0.013}_{-0.012}$	$\chi^2_{\text{plik}}$	766.2	$780.1 (\nu: 15.1)$
$A_{143}^{\text{dustTT}}$	9.09	$9.0^{+3.6}_{-3.6}$	$Y_P$	0.245354	$0.24533^{+0.00021}_{-0.00022}$	$\chi^2_{6\text{DF}}$	0.010	$0.073 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.1^{+8.3}_{-8.2}$	$Y_P^{\text{BBN}}$	0.246680	$0.24665^{+0.00022}_{-0.00022}$	$\chi^2_{\text{MGS}}$	1.41	$1.38 (\nu: 0.2)$
$A_{217}^{\text{dustTT}}$	82.2	$82^{+10}_{-10}$	$10^5 D/H$	2.608	$2.619^{+0.095}_{-0.090}$	$\chi^2_{\text{DR11CMass}}$	2.37	$2.95 (\nu: 0.4)$
$c_{100}$	0.99791	$0.9979^{+0.0016}_{-0.0015}$	Age/Gyr	13.795	$13.78^{+0.20}_{-0.21}$	$\chi^2_{\text{DR11LOWZ}}$	0.47	$0.74 (\nu: 0.2)$
$c_{217}$	0.99599	$0.9960^{+0.0028}_{-0.0028}$	$z_*$	1089.90	$1090.01^{+0.97}_{-0.90}$	$\chi^2_{\text{prior}}$	2.1	$7.4 (\nu: 6.4)$
$H_0$	67.74	$67.6^{+1.5}_{-1.5}$	$r_*$	144.88	$144.85^{+0.98}_{-1.0}$	$\chi^2_{\text{CMB}}$	11270.3	$11286.1 (\nu: 16.3)$
$\Omega_\Lambda$	0.6906	$0.686^{+0.022}_{-0.024}$	$100\theta_*$	1.04122	$1.04119^{+0.00094}_{-0.00093}$	$\chi^2_{\text{BAO}}$	4.26	$5.1 (\nu: 0.9)$

Best-fit  $\chi^2_{\text{eff}} = 11276.69$ ;  $\bar{\chi}^2_{\text{eff}} = 11298.64$ ;  $R - 1 = 0.03072$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.37 DR11LOWZ: 0.47 CMB - smica\_g30\_ftl\_full\_pp: 9.13 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.95 plik\_dx11dr2\_HM\_v18\_TT: 766.23



# 10 mnu+w

## 10.1 base\_mnu\_w\_plikHM\_TT\_lowTEB\_lensing\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022346	$0.02225^{+0.00043}_{-0.00042}$	$\Omega_m$	0.3148	$0.307^{+0.028}_{-0.029}$	$D_A/\text{Gpc}$	13.931	$13.918^{+0.076}_{-0.074}$
$\Omega_c h^2$	0.11763	$0.1184^{+0.0035}_{-0.0035}$	$\Omega_m h^2$	0.14001	$0.1423^{+0.0043}_{-0.0040}$	$z_{\text{drag}}$	1059.70	$1059.55^{+0.88}_{-0.87}$
$100\theta_{\text{MC}}$	1.04118	$1.04099^{+0.00087}_{-0.00087}$	$\Omega_\nu h^2$	0.00003	$< 0.00400$	$r_{\text{drag}}$	147.75	$147.63^{+0.81}_{-0.80}$
$\tau$	0.0710	$0.074^{+0.037}_{-0.035}$	$\Omega_m h^3$	0.0934	$0.0971^{+0.0077}_{-0.0070}$	$k_D$	0.14015	$0.14021^{+0.00091}_{-0.00089}$
$\Sigma m_\nu [\text{eV}]$	0.003	$< 0.372$	$\sigma_8$	0.8089	$0.810^{+0.037}_{-0.035}$	$100\theta_D$	0.16091	$0.16099^{+0.00050}_{-0.00050}$
$w$	-0.934	$-1.04^{+0.19}_{-0.21}$	$\sigma_8 \Omega_m^{0.5}$	0.4538	$0.448^{+0.017}_{-0.017}$	$z_{\text{eq}}$	3345	$3361^{+79}_{-79}$
$\ln(10^{10} A_s)$	3.071	$3.077^{+0.067}_{-0.064}$	$\sigma_8 \Omega_m^{0.25}$	0.6059	$0.603^{+0.020}_{-0.020}$	$k_{\text{eq}}$	0.010209	$0.01026^{+0.00024}_{-0.00024}$
$n_s$	0.9706	$0.968^{+0.011}_{-0.011}$	$\sigma_8/h^{0.5}$	0.9905	$0.981^{+0.030}_{-0.033}$	$100\theta_{\text{eq}}$	0.8237	$0.821^{+0.015}_{-0.015}$
$y_{\text{cal}}$	1.00029	$1.0002^{+0.0048}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.439	$2.457^{+0.064}_{-0.059}$	$100\theta_{s,\text{eq}}$	0.4548	$0.4533^{+0.0079}_{-0.0076}$
$A_{217}^{\text{CIB}}$	66.6	$64^{+10}_{-10}$	$z_{\text{re}}$	9.27	$9.5^{+3.1}_{-3.4}$	$r_{\text{drag}}/D_V(0.57)$	0.07186	$0.07157^{+0.00097}_{-0.00099}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.05	—	$10^9 A_s$	2.156	$2.17^{+0.15}_{-0.14}$	$H(0.57)$	93.56	$92.5^{+1.6}_{-1.8}$
$A_{143}^{\text{tSZ}}$	7.24	$5.1^{+3.7}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8709	$1.873^{+0.024}_{-0.024}$	$D_A(0.57)$	1389.4	$1389^{+23}_{-23}$
$A_{100}^{\text{PS}}$	252	$260^{+50}_{-50}$	$D_{40}$	1223.0	$1227^{+24}_{-23}$	$F_{\text{AP}}(0.57)$	0.6807	$0.673^{+0.016}_{-0.018}$
$A_{143}^{\text{PS}}$	39.0	$44^{+20}_{-20}$	$D_{220}$	5721	$5718^{+79}_{-80}$	$f\sigma_8(0.57)$	0.4631	$0.476^{+0.034}_{-0.031}$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$D_{810}$	2532.7	$2532^{+26}_{-26}$	$\sigma_8(0.57)$	0.6030	$0.603^{+0.028}_{-0.027}$
$A_{217}^{\text{PS}}$	97.7	$97^{+20}_{-20}$	$D_{1420}$	815.8	$814.7^{+9.7}_{-10}$	$\chi^2_{\text{lensing}}$	9.37	$9.6 (\nu: 1.0)$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.69	$230.1^{+3.5}_{-3.6}$	$\chi^2_{\text{lowTEB}}$	10494.95	$10495.9 (\nu: 1.2)$
$A_{100}^{\text{dustTT}}$	7.47	$7.5^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9706	$0.968^{+0.011}_{-0.011}$	$\chi^2_{\text{plik}}$	766.5	$779.6 (\nu: 15.1)$
$A_{143}^{\text{dustTT}}$	9.08	$9.1^{+3.5}_{-3.5}$	$Y_P$	0.245382	$0.24534^{+0.00019}_{-0.00019}$	$\chi^2_{6\text{DF}}$	0.0999	$0.18 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.1}_{-8.1}$	$Y_P^{\text{BBN}}$	0.246709	$0.24666^{+0.00019}_{-0.00019}$	$\chi^2_{\text{MGS}}$	0.93	$1.7 (\nu: 0.6)$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$10^5 D/H$	2.596	$2.615^{+0.081}_{-0.081}$	$\chi^2_{\text{DR11CMass}}$	1.83	$3.6 (\nu: 1.1)$
$c_{100}$	0.99787	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.799	$13.827^{+0.092}_{-0.086}$	$\chi^2_{\text{DR11LOWZ}}$	0.70	$0.77 (\nu: 0.3)$
$c_{217}$	0.99589	$0.9960^{+0.0028}_{-0.0028}$	$z_*$	1089.74	$1089.95^{+0.75}_{-0.75}$	$\chi^2_{\text{prior}}$	2.2	$7.4 (\nu: 6.4)$
$H_0$	66.69	$68.2^{+3.9}_{-3.5}$	$r_*$	145.07	$144.92^{+0.80}_{-0.79}$	$\chi^2_{\text{CMB}}$	11270.9	$11285.0 (\nu: 15.4)$
$\Omega_\Lambda$	0.6852	$0.693^{+0.029}_{-0.028}$	$100\theta_*$	1.04133	$1.04124^{+0.00084}_{-0.00084}$	$\chi^2_{\text{BAO}}$	3.55	$6.3 (\nu: 2.7)$

Best-fit  $\chi^2_{\text{eff}} = 11276.58$ ;  $\bar{\chi}^2_{\text{eff}} = 11298.68$ ;  $R - 1 = 0.00919$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.10 MGS: 0.93 DR11CMass: 1.83 DR11LOWZ: 0.70 CMB - smica\_g30\_ftl\_full\_pp: 9.37 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.95 plik\_dx11dr2\_HM\_v18\_TT: 766.52

# 11 nnu

## 11.1 base\_nnu\_plikHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02224	$0.02230^{+0.00075}_{-0.00071}$	$\Omega_m$	0.3142	$0.312^{+0.042}_{-0.040}$	$D_A/\text{Gpc}$	13.894	$13.83^{+0.49}_{-0.49}$
$\Omega_c h^2$	0.1196	$0.1205^{+0.0081}_{-0.0077}$	$\Omega_m h^2$	0.1425	$0.1435^{+0.0085}_{-0.0080}$	$z_{\text{drag}}$	1059.59	$1059.9^{+2.5}_{-2.4}$
$100\theta_{\text{MC}}$	1.04088	$1.0408^{+0.0011}_{-0.0011}$	$\Omega_m h^3$	0.0960	$0.098^{+0.013}_{-0.012}$	$r_{\text{drag}}$	147.4	$146.7^{+5.5}_{-5.5}$
$\tau$	0.0775	$0.080^{+0.044}_{-0.042}$	$\sigma_8$	0.8290	$0.834^{+0.046}_{-0.045}$	$k_D$	0.14050	$0.1410^{+0.0041}_{-0.0039}$
$N_{\text{eff}}$	3.04	$3.13^{+0.64}_{-0.63}$	$\sigma_8 \Omega_m^{0.5}$	0.4647	$0.465^{+0.027}_{-0.026}$	$100\theta_D$	0.16094	$0.1611^{+0.0014}_{-0.0013}$
$\ln(10^{10} A_s)$	3.089	$3.096^{+0.095}_{-0.089}$	$\sigma_8 \Omega_m^{0.25}$	0.6207	$0.622^{+0.027}_{-0.026}$	$z_{\text{eq}}$	3391	$3380^{+140}_{-150}$
$n_s$	0.9662	$0.969^{+0.032}_{-0.030}$	$\sigma_8/h^{0.5}$	1.0102	$1.011^{+0.038}_{-0.037}$	$k_{\text{eq}}$	0.010347	$0.01036^{+0.00032}_{-0.00031}$
$y_{\text{cal}}$	1.00028	$1.0003^{+0.0049}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.495	$2.495^{+0.095}_{-0.095}$	$100\theta_{\text{eq}}$	0.8150	$0.817^{+0.029}_{-0.027}$
$A_{217}^{\text{CIB}}$	66.5	$64^{+10}_{-10}$	$z_{\text{re}}$	9.94	$10.1^{+3.7}_{-4.1}$	$100\theta_{s,\text{eq}}$	0.4503	$0.452^{+0.015}_{-0.014}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.08	—	$10^9 A_s$	2.195	$2.21^{+0.22}_{-0.20}$	$r_{\text{drag}}/D_V(0.57)$	0.07143	$0.0716^{+0.0023}_{-0.0021}$
$A_{143}^{\text{tSZ}}$	7.09	$5.1^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8796	$1.883^{+0.042}_{-0.044}$	$H(0.57)$	92.9	$93.5^{+5.1}_{-5.0}$
$A_{100}^{\text{PS}}$	252	$259^{+60}_{-60}$	$D_{40}$	1234.5	$1234^{+44}_{-43}$	$D_A(0.57)$	1391	$1382^{+91}_{-92}$
$A_{143}^{\text{PS}}$	39.8	$44^{+20}_{-20}$	$D_{220}$	5715	$5717^{+82}_{-82}$	$F_{\text{AP}}(0.57)$	0.6767	$0.676^{+0.010}_{-0.010}$
$A_{143 \times 217}^{\text{PS}}$	35	$39^{+20}_{-20}$	$D_{810}$	2534.4	$2535^{+28}_{-28}$	$f\sigma_8(0.57)$	0.4827	$0.484^{+0.022}_{-0.021}$
$A_{217}^{\text{PS}}$	98.2	$97^{+20}_{-20}$	$D_{1420}$	815.0	$814^{+10}_{-10}$	$\sigma_8(0.57)$	0.6161	$0.620^{+0.041}_{-0.040}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.51	$230.0^{+4.5}_{-4.6}$	$f_{2000}^{143}$	29.4	$30^{+7}_{-7}$
$A_{100}^{\text{dustTT}}$	7.46	$7.4^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9662	$0.969^{+0.032}_{-0.030}$	$f_{2000}^{143 \times 217}$	32.1	$33^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	8.99	$9.0^{+3.6}_{-3.6}$	$Y_{\text{P}}$	0.2453	$0.2463^{+0.0086}_{-0.0084}$	$f_{2000}^{217}$	105.73	$106.3^{+4.7}_{-4.7}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.1^{+8.1}_{-8.2}$	$Y_{\text{P}}^{\text{BBN}}$	0.2466	$0.2477^{+0.0086}_{-0.0084}$	$\chi_{\text{lowTEB}}^2$	10496.3	$10497.5 (\nu: 4.0)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$10^5 D/H$	2.615	$2.63^{+0.14}_{-0.13}$	$\chi_{\text{plik}}^2$	763.6	$778.2 (\nu: 18.1)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.81	$13.74^{+0.65}_{-0.65}$	$\chi_{\text{prior}}^2$	2.0	$7.4 (\nu: 6.3)$
$c_{217}$	0.99592	$0.9960^{+0.0029}_{-0.0028}$	$z_*$	1090.05	$1090.13^{+0.98}_{-0.97}$	$\chi_{\text{CMB}}^2$	11259.9	$11275.7 (\nu: 16.3)$
$H_0$	67.3	$68.0^{+5.7}_{-5.6}$	$r_*$	144.6	$144.0^{+5.3}_{-5.3}$			
$\Omega_\Lambda$	0.6858	$0.688^{+0.040}_{-0.042}$	$100\theta_*$	1.04108	$1.0410^{+0.0014}_{-0.0014}$			

Best-fit  $\chi_{\text{eff}}^2 = 11261.94$ ;  $\bar{\chi}_{\text{eff}}^2 = 11283.02$ ;  $R - 1 = 0.00593$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.30 plik\_dx11dr2\_HM\_v18\_TT: 763.64

## 11.2 base\_nnu\_plikHM\_TT\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02232	$0.02237^{+0.00069}_{-0.00065}$	$\Omega_m$	0.3091	$0.306^{+0.035}_{-0.035}$	$D_A/\text{Gpc}$	13.856	$13.80^{+0.47}_{-0.47}$
$\Omega_c h^2$	0.1198	$0.1208^{+0.0081}_{-0.0077}$	$\Omega_m h^2$	0.1428	$0.1439^{+0.0085}_{-0.0080}$	$z_{\text{drag}}$	1059.86	$1060.1^{+2.4}_{-2.2}$
$100\theta_{\text{MC}}$	1.04087	$1.0408^{+0.0011}_{-0.0011}$	$\Omega_m h^3$	0.0971	$0.099^{+0.012}_{-0.012}$	$r_{\text{drag}}$	146.9	$146.3^{+5.3}_{-5.2}$
$\tau$	0.0827	$0.084^{+0.043}_{-0.040}$	$\sigma_8$	0.8335	$0.837^{+0.045}_{-0.044}$	$k_D$	0.14081	$0.1413^{+0.0039}_{-0.0037}$
$N_{\text{eff}}$	3.10	$3.18^{+0.61}_{-0.56}$	$\sigma_8 \Omega_m^{0.5}$	0.4634	$0.463^{+0.025}_{-0.024}$	$100\theta_D$	0.16102	$0.1612^{+0.0013}_{-0.0013}$
$\ln(10^{10} A_s)$	3.100	$3.104^{+0.093}_{-0.087}$	$\sigma_8 \Omega_m^{0.25}$	0.6215	$0.622^{+0.028}_{-0.027}$	$z_{\text{eq}}$	3373	$3363^{+120}_{-130}$
$n_s$	0.9695	$0.972^{+0.029}_{-0.027}$	$\sigma_8/h^{0.5}$	1.0110	$1.010^{+0.038}_{-0.038}$	$k_{\text{eq}}$	0.010332	$0.01035^{+0.00031}_{-0.00030}$
$y_{\text{cal}}$	1.00042	$1.0004^{+0.0048}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.494	$2.489^{+0.092}_{-0.092}$	$100\theta_{\text{eq}}$	0.8184	$0.821^{+0.026}_{-0.023}$
$A_{217}^{\text{CIB}}$	67.1	$64^{+10}_{-10}$	$z_{\text{re}}$	10.40	$10.4^{+3.6}_{-3.8}$	$100\theta_{s,\text{eq}}$	0.4521	$0.453^{+0.013}_{-0.012}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$10^9 A_s$	2.220	$2.23^{+0.21}_{-0.20}$	$r_{\text{drag}}/D_V(0.57)$	0.07170	$0.0719^{+0.0020}_{-0.0019}$
$A_{143}^{\text{tSZ}}$	7.23	$5.0^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8814	$1.885^{+0.042}_{-0.043}$	$H(0.57)$	93.39	$94.0^{+4.7}_{-4.3}$
$A_{100}^{\text{PS}}$	253	$260^{+60}_{-60}$	$D_{40}$	1231.7	$1229^{+40}_{-40}$	$D_A(0.57)$	1381	$1371^{+81}_{-83}$
$A_{143}^{\text{PS}}$	38.6	$45^{+20}_{-20}$	$D_{220}$	5719	$5719^{+81}_{-80}$	$F_{\text{AP}}(0.57)$	0.6754	$0.6747^{+0.0089}_{-0.0091}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$D_{810}$	2534.9	$2535^{+28}_{-27}$	$f\sigma_8(0.57)$	0.4840	$0.485^{+0.022}_{-0.021}$
$A_{217}^{\text{PS}}$	97.2	$97^{+20}_{-20}$	$D_{1420}$	815.0	$814^{+10}_{-10}$	$\sigma_8(0.57)$	0.6207	$0.624^{+0.039}_{-0.038}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.44	$229.9^{+4.5}_{-4.6}$	$f_{2000}^{143}$	29.6	$31^{+7}_{-7}$
$A_{100}^{\text{dustTT}}$	7.40	$7.5^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9695	$0.972^{+0.029}_{-0.027}$	$f_{2000}^{143 \times 217}$	32.3	$33^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	9.06	$9.0^{+3.6}_{-3.6}$	$Y_{\text{P}}$	0.2461	$0.2471^{+0.0081}_{-0.0079}$	$f_{2000}^{217}$	105.94	$106.4^{+4.7}_{-4.7}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.2^{+8.2}_{-8.3}$	$Y_{\text{P}}^{\text{BBN}}$	0.2474	$0.2485^{+0.0081}_{-0.0080}$	$\chi_{\text{lowTEB}}^2$	10496.3	$10497.1 (\nu: 3.8)$
$A_{217}^{\text{dustTT}}$	82.2	$82^{+10}_{-10}$	$10^5 D/H$	2.619	$2.64^{+0.14}_{-0.13}$	$\chi_{\text{plik}}^2$	763.6	$778.5 (\nu: 30.5)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.75	$13.67^{+0.60}_{-0.60}$	$\chi_{\text{JLA}}^2$	706.68	$706.89 (\nu: 0.1)$
$c_{217}$	0.99598	$0.9960^{+0.0029}_{-0.0028}$	$z_*$	1090.02	$1090.12^{+0.99}_{-0.97}$	$\chi_{\text{prior}}^2$	2.1	$7.4 (\nu: 6.4)$
$H_0$	68.0	$68.6^{+5.1}_{-5.0}$	$r_*$	144.2	$143.6^{+5.1}_{-5.0}$	$\chi_{\text{CMB}}^2$	11259.9	$11275.6 (\nu: 29.1)$
$\Omega_\Lambda$	0.6909	$0.694^{+0.035}_{-0.035}$	$100\theta_*$	1.04103	$1.0409^{+0.0014}_{-0.0013}$			

Best-fit  $\chi_{\text{eff}}^2 = 11968.68$ ;  $\bar{\chi}_{\text{eff}}^2 = 11989.87$ ;  $R - 1 = 0.00852$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.30 plik\_dx11dr2\_HM\_v18\_TT: 763.57 SN - JLA December\_2013: 706.68

### 11.3 base\_nnu\_plikHM\_TT\_lowTEB\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02227	$0.02232^{+0.00074}_{-0.00069}$	$\Omega_m$	0.3074	$0.305^{+0.038}_{-0.037}$	$D_A/\text{Gpc}$	13.915	$13.86^{+0.47}_{-0.49}$
$\Omega_c h^2$	0.1185	$0.1195^{+0.0079}_{-0.0073}$	$\Omega_m h^2$	0.1415	$0.1424^{+0.0083}_{-0.0076}$	$z_{\text{drag}}$	1059.59	$1059.8^{+2.5}_{-2.3}$
$100\theta_{\text{MC}}$	1.04104	$1.0410^{+0.0011}_{-0.0011}$	$\Omega_m h^3$	0.0960	$0.098^{+0.012}_{-0.012}$	$r_{\text{drag}}$	147.6	$146.9^{+5.3}_{-5.4}$
$\tau$	0.0666	$0.069^{+0.040}_{-0.038}$	$\sigma_8$	0.8158	$0.820^{+0.039}_{-0.037}$	$k_D$	0.14027	$0.1407^{+0.0040}_{-0.0037}$
$N_{\text{eff}}$	3.05	$3.13^{+0.62}_{-0.61}$	$\sigma_8 \Omega_m^{0.5}$	0.4523	$0.452^{+0.018}_{-0.017}$	$100\theta_D$	0.16096	$0.1612^{+0.0014}_{-0.0013}$
$\ln(10^{10} A_s)$	3.064	$3.070^{+0.085}_{-0.079}$	$\sigma_8 \Omega_m^{0.25}$	0.6074	$0.609^{+0.018}_{-0.017}$	$z_{\text{eq}}$	3365	$3353^{+130}_{-140}$
$n_s$	0.9684	$0.971^{+0.030}_{-0.028}$	$\sigma_8/h^{0.5}$	0.9905	$0.991^{+0.022}_{-0.022}$	$k_{\text{eq}}$	0.010270	$0.01029^{+0.00030}_{-0.00029}$
$y_{\text{cal}}$	1.00014	$1.0002^{+0.0049}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.448	$2.446^{+0.057}_{-0.058}$	$100\theta_{\text{eq}}$	0.8199	$0.822^{+0.027}_{-0.027}$
$A_{217}^{\text{CIB}}$	67.2	$65^{+10}_{-10}$	$z_{\text{re}}$	8.89	$9.0^{+3.5}_{-3.9}$	$100\theta_{s,\text{eq}}$	0.4529	$0.454^{+0.014}_{-0.014}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.141	$2.16^{+0.19}_{-0.18}$	$r_{\text{drag}}/D_V(0.57)$	0.07182	$0.0720^{+0.0022}_{-0.0021}$
$A_{143}^{\text{tSZ}}$	7.18	$5.0^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8739	$1.877^{+0.041}_{-0.041}$	$H(0.57)$	93.08	$93.7^{+5.0}_{-4.8}$
$A_{100}^{\text{PS}}$	254	$262^{+60}_{-60}$	$D_{40}$	1224.3	$1223^{+40}_{-39}$	$D_A(0.57)$	1385	$1375^{+85}_{-89}$
$A_{143}^{\text{PS}}$	39.1	$45^{+20}_{-20}$	$D_{220}$	5715	$5716^{+83}_{-80}$	$F_{\text{AP}}(0.57)$	0.6750	$0.6742^{+0.0094}_{-0.0097}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{810}$	2532.7	$2533^{+28}_{-27}$	$f\sigma_8(0.57)$	0.4732	$0.474^{+0.015}_{-0.015}$
$A_{217}^{\text{PS}}$	97.4	$96^{+20}_{-20}$	$D_{1420}$	815.1	$814^{+10}_{-10}$	$\sigma_8(0.57)$	0.6078	$0.612^{+0.037}_{-0.036}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.26	$229.7^{+4.3}_{-4.6}$	$f_{2000}^{143}$	29.9	$31^{+7}_{-7}$
$A_{100}^{\text{dustTT}}$	7.40	$7.5^{+3.6}_{-3.6}$	$n_{s,0.002}$	0.9684	$0.971^{+0.030}_{-0.028}$	$f_{2000}^{143 \times 217}$	32.51	$33^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	9.12	$9.1^{+3.6}_{-3.7}$	$Y_{\text{P}}$	0.2454	$0.2464^{+0.0084}_{-0.0079}$	$f_{2000}^{217}$	106.14	$106.7^{+4.7}_{-4.4}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.3^{+8.0}_{-7.9}$	$Y_{\text{P}}^{\text{BBN}}$	0.2467	$0.2477^{+0.0084}_{-0.0080}$	$\chi_{\text{lensing}}^2$	9.24	$10.0 (\nu: 1.2)$
$A_{217}^{\text{dustTT}}$	82.3	$82^{+10}_{-10}$	$10^5 D/H$	2.610	$2.63^{+0.14}_{-0.13}$	$\chi_{\text{lowTEB}}^2$	10494.83	$10495.6 (\nu: 2.1)$
$c_{100}$	0.99788	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.80	$13.72^{+0.61}_{-0.64}$	$\chi_{\text{plik}}^2$	766.2	$780.5 (\nu: 19.7)$
$c_{217}$	0.99600	$0.9960^{+0.0029}_{-0.0029}$	$z_*$	1089.92	$1090.01^{+0.94}_{-0.93}$	$\chi_{\text{prior}}^2$	2.1	$7.4 (\nu: 6.6)$
$H_0$	67.8	$68.5^{+5.6}_{-5.3}$	$r_*$	144.9	$144.3^{+5.0}_{-5.2}$	$\chi_{\text{CMB}}^2$	11270.3	$11286.2 (\nu: 19.2)$
$\Omega_\Lambda$	0.6926	$0.695^{+0.037}_{-0.038}$	$100\theta_*$	1.04123	$1.0411^{+0.0014}_{-0.0013}$			

Best-fit  $\chi_{\text{eff}}^2 = 11272.43$ ;  $\bar{\chi}_{\text{eff}}^2 = 11293.59$ ;  $R - 1 = 0.01075$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.24 lowl.SMW\_70\_dx11d.2014.10.03\_v5c-Ap: 10494.83 plik\_dx11dr2\_HM\_v18.TT: 766.22

## 11.4 base\_nnu\_plikHM\_TT\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02240	$0.02242^{+0.00061}_{-0.00060}$	$\Omega_m$	0.3056	$0.304^{+0.033}_{-0.031}$	$D_A/\text{Gpc}$	13.784	$13.75^{+0.41}_{-0.40}$
$\Omega_c h^2$	0.1209	$0.1214^{+0.0074}_{-0.0072}$	$\Omega_m h^2$	0.1440	$0.1445^{+0.0076}_{-0.0074}$	$z_{\text{drag}}$	1060.20	$1060.3^{+2.0}_{-2.0}$
$100\theta_{\text{MC}}$	1.04080	$1.0407^{+0.0011}_{-0.0011}$	$\Omega_m h^3$	0.0988	$0.0998^{+0.010}_{-0.0097}$	$r_{\text{drag}}$	146.12	$145.8^{+4.6}_{-4.5}$
$\tau$	0.0843	$0.085^{+0.041}_{-0.039}$	$\sigma_8$	0.8379	$0.839^{+0.041}_{-0.039}$	$k_D$	0.14139	$0.1416^{+0.0034}_{-0.0033}$
$N_{\text{eff}}$	3.19	$3.23^{+0.51}_{-0.49}$	$\sigma_8 \Omega_m^{0.5}$	0.4632	$0.463^{+0.025}_{-0.024}$	$100\theta_D$	0.16119	$0.1613^{+0.0012}_{-0.0012}$
$\ln(10^{10} A_s)$	3.106	$3.108^{+0.086}_{-0.083}$	$\sigma_8 \Omega_m^{0.25}$	0.6230	$0.623^{+0.027}_{-0.027}$	$z_{\text{eq}}$	3362	$3355^{+120}_{-120}$
$n_s$	0.9731	$0.975^{+0.025}_{-0.024}$	$\sigma_8/h^{0.5}$	1.0114	$1.011^{+0.038}_{-0.038}$	$k_{\text{eq}}$	0.010357	$0.01036^{+0.00031}_{-0.00030}$
$y_{\text{cal}}$	1.00041	$1.0004^{+0.0049}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.490	$2.487^{+0.093}_{-0.090}$	$100\theta_{\text{eq}}$	0.8206	$0.822^{+0.023}_{-0.022}$
$A_{217}^{\text{CIB}}$	67.3	$65^{+10}_{-10}$	$z_{\text{re}}$	10.55	$10.5^{+3.4}_{-3.7}$	$100\theta_{s,\text{eq}}$	0.4532	$0.454^{+0.012}_{-0.011}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.233	$2.24^{+0.20}_{-0.18}$	$r_{\text{drag}}/D_V(0.57)$	0.07188	$0.0720^{+0.0018}_{-0.0017}$
$A_{143}^{\text{tSZ}}$	7.18	$5.0^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8869	$1.888^{+0.039}_{-0.040}$	$H(0.57)$	94.05	$94.4^{+4.0}_{-3.8}$
$A_{100}^{\text{PS}}$	254	$261^{+60}_{-60}$	$D_{40}$	1227.6	$1227^{+38}_{-36}$	$D_A(0.57)$	1370	$1364^{+70}_{-69}$
$A_{143}^{\text{PS}}$	39.5	$45^{+20}_{-20}$	$D_{220}$	5720	$5720^{+82}_{-82}$	$F_{\text{AP}}(0.57)$	0.6745	$0.6741^{+0.0083}_{-0.0081}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{810}$	2536.3	$2536^{+28}_{-28}$	$f\sigma_8(0.57)$	0.4856	$0.486^{+0.021}_{-0.021}$
$A_{217}^{\text{PS}}$	97.5	$97^{+20}_{-20}$	$D_{1420}$	814.8	$814^{+10}_{-10}$	$\sigma_8(0.57)$	0.6248	$0.626^{+0.035}_{-0.033}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.09	$229.7^{+4.3}_{-4.4}$	$f_{2000}^{143}$	30.1	$31^{+7}_{-6}$
$A_{100}^{\text{dustTT}}$	7.42	$7.5^{+3.6}_{-3.6}$	$n_{s,0.002}$	0.9731	$0.975^{+0.025}_{-0.024}$	$f_{2000}^{143 \times 217}$	32.65	$33^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	9.02	$9.0^{+3.6}_{-3.7}$	$Y_P$	0.2473	$0.2479^{+0.0067}_{-0.0069}$	$f_{2000}^{217}$	106.27	$106.7^{+4.6}_{-4.6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.1^{+8.2}_{-8.3}$	$Y_P^{\text{BBN}}$	0.2486	$0.2492^{+0.0067}_{-0.0069}$	$\chi_{\text{lowTEB}}^2$	10495.9	$10496.8 (\nu: 3.6)$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$10^5 D/H$	2.634	$2.65^{+0.13}_{-0.13}$	$\chi_{\text{plik}}^2$	764.2	$778.7 (\nu: 18.9)$
$c_{100}$	0.99794	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.66	$13.62^{+0.52}_{-0.50}$	$\chi_{\text{H070p6}}^2$	0.35	$0.66 (\nu: 0.4)$
$c_{217}$	0.99598	$0.9960^{+0.0029}_{-0.0028}$	$z_*$	1090.10	$1090.16^{+0.97}_{-0.96}$	$\chi_{\text{prior}}^2$	2.0	$7.4 (\nu: 6.5)$
$H_0$	68.64	$69.0^{+4.4}_{-4.2}$	$r_*$	143.48	$143.2^{+4.4}_{-4.3}$	$\chi_{\text{CMB}}^2$	11260.1	$11275.5 (\nu: 16.7)$
$\Omega_\Lambda$	0.6944	$0.696^{+0.031}_{-0.033}$	$100\theta_*$	1.04089	$1.0408^{+0.0013}_{-0.0013}$			

Best-fit  $\chi_{\text{eff}}^2 = 11262.49$ ;  $\bar{\chi}_{\text{eff}}^2 = 11283.57$ ;  $R - 1 = 0.00564$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.93 plik\_dx11dr2\_HM\_v18\_TT: 764.16 Hubble - H070p6: 0.35

### 11.5 base\_nnu\_plikHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00075}_{-0.00069}$	$\Omega_m$	$0.310^{+0.040}_{-0.039}$	$D_A/\text{Gpc}$	$13.83^{+0.48}_{-0.48}$
$\Omega_c h^2$	$0.1206^{+0.0080}_{-0.0077}$	$\Omega_m h^2$	$0.1436^{+0.0084}_{-0.0080}$	$z_{\text{drag}}$	$1059.9^{+2.5}_{-2.3}$
$100\theta_{\text{MC}}$	$1.0408^{+0.0011}_{-0.0011}$	$\Omega_m h^3$	$0.098^{+0.013}_{-0.012}$	$r_{\text{drag}}$	$146.6^{+5.4}_{-5.5}$
$\tau$	$0.082^{+0.040}_{-0.039}$	$\sigma_8$	$0.835^{+0.043}_{-0.042}$	$k_D$	$0.1410^{+0.0040}_{-0.0038}$
$N_{\text{eff}}$	$3.14^{+0.63}_{-0.62}$	$\sigma_8 \Omega_m^{0.5}$	$0.465^{+0.027}_{-0.026}$	$100\theta_D$	$0.1611^{+0.0014}_{-0.0013}$
$\ln(10^{10} A_s)$	$3.100^{+0.087}_{-0.084}$	$\sigma_8 \Omega_m^{0.25}$	$0.623^{+0.027}_{-0.026}$	$z_{\text{eq}}$	$3376^{+140}_{-140}$
$n_s$	$0.970^{+0.031}_{-0.029}$	$\sigma_8/h^{0.5}$	$1.012^{+0.037}_{-0.036}$	$k_{\text{eq}}$	$0.01036^{+0.00031}_{-0.00030}$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	$2.496^{+0.093}_{-0.093}$	$100\theta_{\text{eq}}$	$0.818^{+0.029}_{-0.026}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$z_{\text{re}}$	$10.3^{+3.2}_{-3.7}$	$100\theta_{\text{s,eq}}$	$0.452^{+0.015}_{-0.013}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s$	$2.22^{+0.20}_{-0.19}$	$r_{\text{drag}}/D_V(0.57)$	$0.0717^{+0.0023}_{-0.0020}$
$A_{143}^{\text{tSZ}}$	$5.1^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	$1.884^{+0.042}_{-0.044}$	$H(0.57)$	$93.6^{+5.0}_{-4.9}$
$A_{100}^{\text{PS}}$	$259^{+60}_{-60}$	$D_{40}$	$1233^{+44}_{-42}$	$D_A(0.57)$	$1379^{+88}_{-91}$
$A_{143}^{\text{PS}}$	$44^{+20}_{-20}$	$D_{220}$	$5717^{+82}_{-83}$	$F_{\text{AP}}(0.57)$	$0.676^{+0.010}_{-0.010}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$D_{810}$	$2535^{+28}_{-28}$	$f\sigma_8(0.57)$	$0.485^{+0.021}_{-0.020}$
$A_{217}^{\text{PS}}$	$97^{+20}_{-20}$	$D_{1420}$	$814^{+10}_{-10}$	$\sigma_8(0.57)$	$0.622^{+0.039}_{-0.037}$
$A^{\text{kSZ}}$	—	$D_{2000}$	$230.0^{+4.5}_{-4.6}$	$f_{2000}^{143}$	$30^{+7}_{-7}$
$A_{100}^{\text{dustTT}}$	$7.4^{+3.6}_{-3.7}$	$n_{\text{s},0.002}$	$0.970^{+0.031}_{-0.029}$	$f_{2000}^{143 \times 217}$	$33^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	$9.0^{+3.6}_{-3.7}$	$Y_{\text{P}}$	$0.2465^{+0.0084}_{-0.0083}$	$f_{2000}^{217}$	$106.3^{+4.7}_{-4.7}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.1^{+8.2}_{-8.2}$	$Y_{\text{P}}^{\text{BBN}}$	$0.2478^{+0.0085}_{-0.0083}$	$\chi_{\text{lowTEB}}^2$	$10497.4 (\nu: 3.9)$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	$2.63^{+0.14}_{-0.13}$	$\chi_{\text{plik}}^2$	$778.2 (\nu: 31.7)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$\text{Age}/\text{Gyr}$	$13.72^{+0.63}_{-0.64}$	$\chi_{\text{prior}}^2$	$7.4 (\nu: 6.5)$
$c_{217}$	$0.9960^{+0.0029}_{-0.0029}$	$z_*$	$1090.13^{+0.98}_{-0.97}$	$\chi_{\text{CMB}}^2$	$11275.6 (\nu: 30.4)$
$H_0$	$68.1^{+5.6}_{-5.4}$	$r_*$	$143.9^{+5.2}_{-5.2}$		
$\Omega_\Lambda$	$0.690^{+0.039}_{-0.040}$	$100\theta_*$	$1.0409^{+0.0014}_{-0.0014}$		

$$\bar{\chi}_{\text{eff}}^2 = 11282.96; R - 1 = 0.00790$$

## 11.6 base\_nnu\_plikHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022167	$0.02220^{+0.00048}_{-0.00048}$	$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.16}_{-0.16}$	Age/Gyr	13.925	$13.88^{+0.43}_{-0.42}$
$\Omega_c h^2$	0.1183	$0.1191^{+0.0062}_{-0.0061}$	$A_{143}^{\text{dustTE}}$	0.155	$0.16^{+0.11}_{-0.10}$	$z_*$	1089.92	$1090.00^{+0.71}_{-0.70}$
$100\theta_{\text{MC}}$	1.04093	$1.04087^{+0.00092}_{-0.00086}$	$A_{143 \times 217}^{\text{dustTE}}$	0.341	$0.34^{+0.16}_{-0.16}$	$r_*$	145.58	$145.1^{+3.8}_{-3.7}$
$\tau$	0.0778	$0.077^{+0.035}_{-0.035}$	$A_{217}^{\text{dustTE}}$	1.67	$1.67^{+0.50}_{-0.50}$	$100\theta_*$	1.04120	$1.0411^{+0.0011}_{-0.0011}$
$N_{\text{eff}}$	2.938	$2.99^{+0.41}_{-0.39}$	$c_{100}$	0.99823	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.982	$13.94^{+0.35}_{-0.34}$
$\ln(10^{10} A_s)$	3.087	$3.088^{+0.074}_{-0.074}$	$c_{217}$	0.99587	$0.9960^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.25	$1059.4^{+1.7}_{-1.7}$
$n_s$	0.9607	$0.962^{+0.019}_{-0.019}$	$H_0$	66.52	$66.8^{+3.2}_{-3.1}$	$r_{\text{drag}}$	148.32	$147.9^{+4.0}_{-3.9}$
$y_{\text{cal}}$	1.0003	$1.0005^{+0.0051}_{-0.0050}$	$\Omega_\Lambda$	0.6811	$0.682^{+0.023}_{-0.024}$	$k_D$	0.13984	$0.1402^{+0.0029}_{-0.0029}$
$A_{217}^{\text{CIB}}$	64.2	$64^{+10}_{-10}$	$\Omega_m$	0.3189	$0.318^{+0.024}_{-0.023}$	$100\theta_D$	0.16068	$0.16079^{+0.00084}_{-0.00085}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.35	—	$\Omega_m h^2$	0.1411	$0.1419^{+0.0064}_{-0.0063}$	$z_{\text{eq}}$	3406	$3403^{+80}_{-79}$
$A_{143}^{\text{tSZ}}$	6.98	$5.4^{+3.5}_{-3.7}$	$\Omega_m h^3$	0.0939	$0.0949^{+0.0082}_{-0.0077}$	$k_{\text{eq}}$	0.010321	$0.01034^{+0.00024}_{-0.00024}$
$A_{100}^{\text{PS}}$	252	$259^{+60}_{-50}$	$\sigma_8$	0.8256	$0.828^{+0.036}_{-0.034}$	$100\theta_{\text{eq}}$	0.8119	$0.813^{+0.015}_{-0.015}$
$A_{143}^{\text{PS}}$	42.8	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4662	$0.466^{+0.019}_{-0.019}$	$100\theta_{\text{s,eq}}$	0.4488	$0.4492^{+0.0077}_{-0.0076}$
$A_{143 \times 217}^{\text{PS}}$	42.4	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6204	$0.621^{+0.023}_{-0.024}$	$r_{\text{drag}}/D_V(0.57)$	0.07119	$0.0713^{+0.0012}_{-0.0012}$
$A_{217}^{\text{PS}}$	101.6	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0123	$1.012^{+0.032}_{-0.033}$	$H(0.57)$	92.07	$92.4^{+3.1}_{-3.0}$
$A^{\text{kSZ}}$	0.00	$< 7.69$	$\langle d^2 \rangle^{1/2}$	2.510	$2.508^{+0.076}_{-0.078}$	$D_A(0.57)$	1406	$1400^{+56}_{-55}$
$A_{100}^{\text{dustTT}}$	7.37	$7.4^{+3.7}_{-3.7}$	$z_{\text{re}}$	9.94	$9.9^{+3.1}_{-3.4}$	$F_{\text{AP}}(0.57)$	0.6779	$0.6776^{+0.0059}_{-0.0057}$
$A_{143}^{\text{dustTT}}$	8.90	$8.9^{+3.6}_{-3.6}$	$10^9 A_s$	2.191	$2.19^{+0.17}_{-0.16}$	$f\sigma_8(0.57)$	0.4819	$0.483^{+0.018}_{-0.018}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.0^{+8.1}_{-8.1}$	$10^9 A_s e^{-2\tau}$	1.8752	$1.878^{+0.036}_{-0.037}$	$\sigma_8(0.57)$	0.6124	$0.614^{+0.030}_{-0.028}$
$A_{217}^{\text{dustTT}}$	82.2	$82^{+10}_{-10}$	$D_{40}$	1245.0	$1245^{+32}_{-31}$	$f_{2000}^{143}$	28.4	$29^{+6}_{-6}$
$A_{100}^{\text{dustEE}}$	0.0810	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5728	$5730^{+76}_{-76}$	$f_{2000}^{143 \times 217}$	31.57	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0485	$0.0486^{+0.0099}_{-0.0098}$	$D_{810}$	2535.1	$2535^{+28}_{-27}$	$f_{2000}^{217}$	105.13	$105.6^{+4.0}_{-4.0}$
$A_{100 \times 217}^{\text{dustEE}}$	0.0996	$0.0996^{+0.064}_{-0.063}$	$D_{1420}$	815.7	$815.0^{+9.8}_{-9.5}$	$\chi_{\text{lowTEB}}^2$	10497.53	$10498.2 (\nu: 2.7)$
$A_{143}^{\text{dustEE}}$	0.1001	$0.0999^{+0.014}_{-0.013}$	$D_{2000}$	231.12	$230.7^{+3.7}_{-3.6}$	$\chi_{\text{plik}}^2$	2431.2	$2451.0 (\nu: 23.5)$
$A_{143 \times 217}^{\text{dustEE}}$	0.225	$0.224^{+0.091}_{-0.093}$	$n_{\text{s},0.002}$	0.9607	$0.962^{+0.019}_{-0.019}$	$\chi_{\text{prior}}^2$	6.5	$19.2 (\nu: 15.0)$
$A_{217}^{\text{dustEE}}$	0.654	$0.65^{+0.26}_{-0.26}$	$Y_{\text{P}}$	0.2438	$0.2445^{+0.0056}_{-0.0057}$	$\chi_{\text{CMB}}^2$	12928.7	$12949.2 (\nu: 22.8)$
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.074}_{-0.074}$	$Y_{\text{P}}^{\text{BBN}}$	0.2451	$0.2458^{+0.0057}_{-0.0057}$			
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.132^{+0.057}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.592	$2.603^{+0.091}_{-0.091}$			

Best-fit  $\chi_{\text{eff}}^2 = 12935.24$ ;  $\bar{\chi}_{\text{eff}}^2 = 12968.38$ ;  $R - 1 = 0.00667$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10497.53 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.18

## 11.7 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022223	$0.02224^{+0.00047}_{-0.00046}$	$A_{100 \times 217}^{\text{dust}TE}$	0.301	$0.30^{+0.16}_{-0.16}$	Age/Gyr	13.866	$13.85^{+0.41}_{-0.41}$
$\Omega_c h^2$	0.1188	$0.1192^{+0.0062}_{-0.0060}$	$A_{143}^{\text{dust}TE}$	0.156	$0.15^{+0.11}_{-0.10}$	$z_*$	1089.95	$1089.98^{+0.70}_{-0.70}$
$100\theta_{\text{MC}}$	1.04088	$1.04086^{+0.00090}_{-0.00085}$	$A_{143 \times 217}^{\text{dust}TE}$	0.342	$0.34^{+0.16}_{-0.16}$	$r_*$	145.12	$144.9^{+3.7}_{-3.7}$
$\tau$	0.0790	$0.079^{+0.035}_{-0.035}$	$A_{217}^{\text{dust}TE}$	1.67	$1.67^{+0.51}_{-0.50}$	$100\theta_*$	1.04112	$1.0411^{+0.0011}_{-0.0011}$
$N_{\text{eff}}$	2.992	$3.02^{+0.40}_{-0.38}$	$c_{100}$	0.99820	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.939	$13.92^{+0.35}_{-0.34}$
$\ln(10^{10} A_s)$	3.090	$3.092^{+0.073}_{-0.073}$	$c_{217}$	0.99585	$0.9960^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.47	$1059.5^{+1.6}_{-1.6}$
$n_s$	0.9633	$0.964^{+0.019}_{-0.018}$	$H_0$	66.99	$67.1^{+3.1}_{-3.0}$	$r_{\text{drag}}$	147.84	$147.6^{+3.9}_{-3.8}$
$y_{\text{cal}}$	1.0003	$1.0005^{+0.0051}_{-0.0050}$	$\Omega_\Lambda$	0.6843	$0.685^{+0.022}_{-0.022}$	$k_D$	0.14018	$0.1403^{+0.0028}_{-0.0028}$
$A_{217}^{\text{CIB}}$	65.3	$64^{+10}_{-10}$	$\Omega_m$	0.3157	$0.315^{+0.022}_{-0.022}$	$100\theta_D$	0.16079	$0.16083^{+0.00083}_{-0.00083}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.20	—	$\Omega_m h^2$	0.1417	$0.1421^{+0.0064}_{-0.0062}$	$z_{\text{eq}}$	3396	$3394^{+75}_{-74}$
$A_{143}^{\text{tSZ}}$	7.16	$5.4^{+3.8}_{-3.7}$	$\Omega_m h^3$	0.0949	$0.0954^{+0.0081}_{-0.0076}$	$k_{\text{eq}}$	0.010326	$0.01034^{+0.00024}_{-0.00024}$
$A_{100}^{\text{PS}}$	253	$259^{+60}_{-50}$	$\sigma_8$	0.8279	$0.829^{+0.036}_{-0.034}$	$100\theta_{\text{eq}}$	0.8140	$0.814^{+0.015}_{-0.014}$
$A_{143}^{\text{PS}}$	40.6	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4652	$0.466^{+0.019}_{-0.019}$	$100\theta_{\text{s,eq}}$	0.4498	$0.4500^{+0.0073}_{-0.0072}$
$A_{143 \times 217}^{\text{PS}}$	38.3	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6206	$0.621^{+0.023}_{-0.023}$	$r_{\text{drag}}/D_V(0.57)$	0.07135	$0.0714^{+0.0011}_{-0.0011}$
$A_{217}^{\text{PS}}$	100.0	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0114	$1.012^{+0.033}_{-0.033}$	$H(0.57)$	92.51	$92.7^{+3.0}_{-2.9}$
$A^{\text{kSZ}}$	0.00	$< 7.77$	$\langle d^2 \rangle^{1/2}$	2.505	$2.506^{+0.075}_{-0.078}$	$D_A(0.57)$	1398	$1395^{+53}_{-53}$
$A_{100}^{\text{dust}TT}$	7.31	$7.4^{+3.6}_{-3.7}$	$z_{\text{re}}$	10.05	$10.0^{+3.2}_{-3.3}$	$F_{\text{AP}}(0.57)$	0.6771	$0.6770^{+0.0055}_{-0.0055}$
$A_{143}^{\text{dust}TT}$	8.90	$8.9^{+3.5}_{-3.6}$	$10^9 A_s$	2.199	$2.20^{+0.17}_{-0.16}$	$f\sigma_8(0.57)$	0.4824	$0.483^{+0.019}_{-0.018}$
$A_{143 \times 217}^{\text{dust}TT}$	17.4	$17.0^{+8.2}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8773	$1.879^{+0.036}_{-0.037}$	$\sigma_8(0.57)$	0.6148	$0.616^{+0.030}_{-0.028}$
$A_{217}^{\text{dust}TT}$	81.8	$82^{+10}_{-10}$	$D_{40}$	1241.3	$1243^{+30}_{-30}$	$f_{2000}^{143}$	28.8	$29^{+6}_{-6}$
$A_{100}^{\text{dust}EE}$	0.0813	$0.081^{+0.011}_{-0.012}$	$D_{220}$	5727	$5731^{+76}_{-77}$	$f_{2000}^{143 \times 217}$	31.84	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0488	$0.0487^{+0.0098}_{-0.0099}$	$D_{810}$	2534.7	$2535^{+28}_{-27}$	$f_{2000}^{217}$	105.45	$105.7^{+4.0}_{-4.0}$
$A_{100 \times 217}^{\text{dust}EE}$	0.101	$0.0996^{+0.062}_{-0.063}$	$D_{1420}$	815.2	$815.0^{+9.8}_{-9.5}$	$\chi_{\text{lowTEB}}^2$	10497.16	$10498.0 (\nu: 2.7)$
$A_{143}^{\text{dust}EE}$	0.1002	$0.100^{+0.014}_{-0.014}$	$D_{2000}$	230.79	$230.6^{+3.7}_{-3.6}$	$\chi_{\text{plik}}^2$	2431.4	$2451.1 (\nu: 23.6)$
$A_{143 \times 217}^{\text{dust}EE}$	0.222	$0.224^{+0.090}_{-0.092}$	$n_{\text{s},0.002}$	0.9633	$0.964^{+0.019}_{-0.018}$	$\chi_{\text{JLA}}^2$	706.89	$706.97 (\nu: 0.1)$
$A_{217}^{\text{dust}EE}$	0.650	$0.65^{+0.26}_{-0.26}$	$Y_{\text{P}}$	0.2446	$0.2449^{+0.0056}_{-0.0055}$	$\chi_{\text{prior}}^2$	6.8	$19.3 (\nu: 15.1)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.074}_{-0.075}$	$Y_{\text{P}}^{\text{BBN}}$	0.2459	$0.2462^{+0.0056}_{-0.0055}$	$\chi_{\text{CMB}}^2$	12928.5	$12949.1 (\nu: 22.5)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.131^{+0.057}_{-0.058}$	$10^5 \text{D}/\text{H}$	2.600	$2.605^{+0.091}_{-0.091}$			

Best-fit  $\chi_{\text{eff}}^2 = 13642.26$ ;  $\bar{\chi}_{\text{eff}}^2 = 13675.33$ ;  $R - 1 = 0.00924$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10497.16 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.40 SN - JLA December\_2013: 706.89



## 11.8 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022137	$0.02216^{+0.00045}_{-0.00046}$	$A_{100 \times 217}^{\text{dustTE}}$	0.302	$0.30^{+0.16}_{-0.17}$	Age/Gyr	13.959	$13.93^{+0.41}_{-0.40}$
$\Omega_c h^2$	0.1173	$0.1178^{+0.0058}_{-0.0057}$	$A_{143}^{\text{dustTE}}$	0.155	$0.15^{+0.10}_{-0.11}$	$z_*$	1089.83	$1089.89^{+0.70}_{-0.67}$
$100\theta_{\text{MC}}$	1.04107	$1.04103^{+0.00087}_{-0.00083}$	$A_{143 \times 217}^{\text{dustTE}}$	0.339	$0.34^{+0.16}_{-0.16}$	$r_*$	146.05	$145.7^{+3.6}_{-3.5}$
$\tau$	0.0599	$0.060^{+0.028}_{-0.028}$	$A_{217}^{\text{dustTE}}$	1.67	$1.67^{+0.51}_{-0.49}$	$100\theta_*$	1.04138	$1.0413^{+0.0011}_{-0.0010}$
$N_{\text{eff}}$	2.900	$2.94^{+0.38}_{-0.38}$	$c_{100}$	0.99820	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	14.025	$14.00^{+0.33}_{-0.32}$
$\ln(10^{10} A_s)$	3.048	$3.049^{+0.058}_{-0.056}$	$c_{217}$	0.99590	$0.9961^{+0.0029}_{-0.0029}$	$z_{\text{drag}}$	1059.09	$1059.2^{+1.6}_{-1.6}$
$n_s$	0.9598	$0.961^{+0.019}_{-0.018}$	$H_0$	66.46	$66.7^{+3.0}_{-3.0}$	$r_{\text{drag}}$	148.81	$148.5^{+3.7}_{-3.6}$
$y_{\text{cal}}$	1.0000	$1.0002^{+0.0050}_{-0.0050}$	$\Omega_\Lambda$	0.6828	$0.684^{+0.021}_{-0.023}$	$k_D$	0.13945	$0.1397^{+0.0027}_{-0.0027}$
$A_{217}^{\text{CIB}}$	65.8	$64^{+10}_{-10}$	$\Omega_m$	0.3172	$0.316^{+0.023}_{-0.021}$	$100\theta_D$	0.16063	$0.16072^{+0.00083}_{-0.00084}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.20	—	$\Omega_m h^2$	0.1401	$0.1406^{+0.0060}_{-0.0059}$	$z_{\text{eq}}$	3399	$3395^{+78}_{-74}$
$A_{143}^{\text{tSZ}}$	7.15	$5.4^{+3.7}_{-3.8}$	$\Omega_m h^3$	0.0931	$0.0938^{+0.0077}_{-0.0074}$	$k_{\text{eq}}$	0.010272	$0.01029^{+0.00023}_{-0.00023}$
$A_{100}^{\text{PS}}$	255	$262^{+60}_{-60}$	$\sigma_8$	0.8075	$0.809^{+0.027}_{-0.025}$	$100\theta_{\text{eq}}$	0.8132	$0.814^{+0.015}_{-0.015}$
$A_{143}^{\text{PS}}$	40.6	$43^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4548	$0.455^{+0.013}_{-0.014}$	$100\theta_{\text{s,eq}}$	0.4495	$0.4499^{+0.0074}_{-0.0075}$
$A_{143 \times 217}^{\text{PS}}$	38.1	$39^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6060	$0.607^{+0.016}_{-0.015}$	$r_{\text{drag}}/D_V(0.57)$	0.07130	$0.0714^{+0.0011}_{-0.0011}$
$A_{217}^{\text{PS}}$	99.2	$97^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9905	$0.990^{+0.021}_{-0.021}$	$H(0.57)$	91.87	$92.1^{+2.9}_{-2.9}$
$A^{\text{kSZ}}$	0.00	$< 8.12$	$\langle d^2 \rangle^{1/2}$	2.460	$2.459^{+0.050}_{-0.050}$	$D_A(0.57)$	1408	$1404^{+54}_{-52}$
$A_{100}^{\text{dustTT}}$	7.37	$7.4^{+3.8}_{-3.8}$	$z_{\text{re}}$	8.23	$8.2^{+2.8}_{-2.8}$	$F_{\text{AP}}(0.57)$	0.6775	$0.6772^{+0.0058}_{-0.0054}$
$A_{143}^{\text{dustTT}}$	9.03	$9.0^{+3.5}_{-3.6}$	$10^9 A_s$	2.106	$2.11^{+0.12}_{-0.12}$	$f\sigma_8(0.57)$	0.4709	$0.471^{+0.013}_{-0.012}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.2^{+8.2}_{-8.3}$	$10^9 A_s e^{-2\tau}$	1.8686	$1.871^{+0.035}_{-0.036}$	$\sigma_8(0.57)$	0.5993	$0.601^{+0.024}_{-0.022}$
$A_{217}^{\text{dustTT}}$	81.7	$82^{+10}_{-20}$	$D_{40}$	1237.3	$1238^{+30}_{-29}$	$f_{2000}^{143}$	28.8	$30^{+6}_{-6}$
$A_{100}^{\text{dustEE}}$	0.0810	$0.081^{+0.011}_{-0.012}$	$D_{220}$	5724	$5726^{+75}_{-75}$	$f_{2000}^{143 \times 217}$	31.85	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0487	$0.0487^{+0.0097}_{-0.0099}$	$D_{810}$	2532.8	$2533^{+27}_{-28}$	$f_{2000}^{217}$	105.36	$105.8^{+4.0}_{-3.9}$
$A_{100 \times 217}^{\text{dustEE}}$	0.100	$0.099^{+0.063}_{-0.064}$	$D_{1420}$	815.6	$815.0^{+9.6}_{-9.7}$	$\chi^2_{\text{lensing}}$	9.64	$10.3 (\nu: 1.6)$
$A_{143}^{\text{dustEE}}$	0.0999	$0.100^{+0.014}_{-0.013}$	$D_{2000}$	230.82	$230.5^{+3.6}_{-3.6}$	$\chi^2_{\text{lowTEB}}$	10496.14	$10496.7 (\nu: 1.4)$
$A_{143 \times 217}^{\text{dustEE}}$	0.225	$0.226^{+0.088}_{-0.092}$	$n_{\text{s},0.002}$	0.9598	$0.961^{+0.019}_{-0.018}$	$\chi^2_{\text{plik}}$	2434.3	$2453.6 (\nu: 22.8)$
$A_{217}^{\text{dustEE}}$	0.658	$0.66^{+0.26}_{-0.24}$	$Y_{\text{P}}$	0.2433	$0.2438^{+0.0054}_{-0.0055}$	$\chi^2_{\text{prior}}$	6.6	$19.3 (\nu: 15.0)$
$A_{100}^{\text{dustTE}}$	0.140	$0.141^{+0.075}_{-0.073}$	$Y_{\text{P}}^{\text{BBN}}$	0.2446	$0.2451^{+0.0054}_{-0.0055}$	$\chi^2_{\text{CMB}}$	12940.0	$12960.5 (\nu: 22.4)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.057}_{-0.058}$	$10^5 \text{D}/\text{H}$	2.584	$2.593^{+0.093}_{-0.086}$			

Best-fit  $\chi^2_{\text{eff}} = 12946.67$ ;  $\bar{\chi}^2_{\text{eff}} = 12979.84$ ;  $R - 1 = 0.02934$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.64 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.14 plik\_dx11dr2\_HM\_v18.TTTEEE: 2434.25

## 11.9 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022284	$0.02229^{+0.00045}_{-0.00044}$	$A_{100 \times 217}^{\text{dustTE}}$	0.302	$0.30^{+0.16}_{-0.16}$	Age/Gyr	13.801	$13.79^{+0.39}_{-0.38}$
$\Omega_c h^2$	0.1195	$0.1199^{+0.0059}_{-0.0059}$	$A_{143}^{\text{dustTE}}$	0.155	$0.15^{+0.11}_{-0.10}$	$z_*$	1090.00	$1090.03^{+0.70}_{-0.70}$
$100\theta_{\text{MC}}$	1.04081	$1.04078^{+0.00086}_{-0.00082}$	$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.16}_{-0.16}$	$r_*$	144.58	$144.4^{+3.5}_{-3.5}$
$\tau$	0.0827	$0.081^{+0.035}_{-0.035}$	$A_{217}^{\text{dustTE}}$	1.67	$1.67^{+0.51}_{-0.50}$	$100\theta_*$	1.04100	$1.0410^{+0.0011}_{-0.0010}$
$N_{\text{eff}}$	3.052	$3.07^{+0.38}_{-0.37}$	$c_{100}$	0.99820	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.889	$13.87^{+0.33}_{-0.32}$
$\ln(10^{10} A_s)$	3.100	$3.098^{+0.073}_{-0.073}$	$c_{217}$	0.99596	$0.9960^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.70	$1059.8^{+1.5}_{-1.5}$
$n_s$	0.9662	$0.966^{+0.018}_{-0.017}$	$H_0$	67.48	$67.6^{+3.0}_{-2.8}$	$r_{\text{drag}}$	147.28	$147.1^{+3.7}_{-3.6}$
$y_{\text{cal}}$	1.0003	$1.0005^{+0.0051}_{-0.0050}$	$\Omega_\Lambda$	0.6871	$0.687^{+0.021}_{-0.021}$	$k_D$	0.14058	$0.1407^{+0.0027}_{-0.0027}$
$A_{217}^{\text{CIB}}$	66.1	$64^{+10}_{-10}$	$\Omega_m$	0.3129	$0.313^{+0.021}_{-0.021}$	$100\theta_D$	0.16090	$0.16094^{+0.00078}_{-0.00080}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.17	—	$\Omega_m h^2$	0.1425	$0.1429^{+0.0061}_{-0.0061}$	$z_{\text{eq}}$	3386	$3388^{+74}_{-73}$
$A_{143}^{\text{tSZ}}$	7.14	$5.4^{+3.6}_{-3.8}$	$\Omega_m h^3$	0.0961	$0.0966^{+0.0077}_{-0.0072}$	$k_{\text{eq}}$	0.010340	$0.01036^{+0.00024}_{-0.00024}$
$A_{100}^{\text{PS}}$	255	$260^{+60}_{-50}$	$\sigma_8$	0.8329	$0.833^{+0.035}_{-0.034}$	$100\theta_{\text{eq}}$	0.8158	$0.816^{+0.014}_{-0.014}$
$A_{143}^{\text{PS}}$	40.5	$43^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4659	$0.466^{+0.019}_{-0.019}$	$100\theta_{\text{s,eq}}$	0.4508	$0.4507^{+0.0073}_{-0.0071}$
$A_{143 \times 217}^{\text{PS}}$	37.2	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6230	$0.623^{+0.023}_{-0.024}$	$r_{\text{drag}}/D_V(0.57)$	0.07149	$0.0715^{+0.0011}_{-0.0011}$
$A_{217}^{\text{PS}}$	99.0	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0140	$1.013^{+0.033}_{-0.033}$	$H(0.57)$	92.98	$93.1^{+2.8}_{-2.7}$
$A^{\text{kSZ}}$	0.00	$< 7.89$	$\langle d^2 \rangle^{1/2}$	2.507	$2.505^{+0.075}_{-0.077}$	$D_A(0.57)$	1389	$1388^{+50}_{-50}$
$A_{100}^{\text{dustTT}}$	7.42	$7.5^{+3.6}_{-3.7}$	$z_{\text{re}}$	10.40	$10.2^{+3.2}_{-3.3}$	$F_{\text{AP}}(0.57)$	0.6764	$0.6765^{+0.0053}_{-0.0053}$
$A_{143}^{\text{dustTT}}$	9.00	$8.9^{+3.6}_{-3.6}$	$10^9 A_s$	2.220	$2.22^{+0.17}_{-0.16}$	$f\sigma_8(0.57)$	0.4846	$0.485^{+0.018}_{-0.018}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.0^{+8.2}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8811	$1.883^{+0.035}_{-0.035}$	$\sigma_8(0.57)$	0.6193	$0.619^{+0.029}_{-0.027}$
$A_{217}^{\text{dustTT}}$	81.8	$82^{+10}_{-10}$	$D_{40}$	1238.7	$1240^{+29}_{-30}$	$f_{2000}^{143}$	29.1	$30^{+6}_{-6}$
$A_{100}^{\text{dustEE}}$	0.0814	$0.081^{+0.011}_{-0.012}$	$D_{220}$	5727	$5731^{+76}_{-77}$	$f_{2000}^{143 \times 217}$	32.01	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0491	$0.0489^{+0.0098}_{-0.0099}$	$D_{810}$	2535.6	$2536^{+27}_{-27}$	$f_{2000}^{217}$	105.60	$105.9^{+4.0}_{-3.9}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.099^{+0.063}_{-0.063}$	$D_{1420}$	815.1	$814.8^{+9.9}_{-9.4}$	$\chi_{\text{lowTEB}}^2$	10497.09	$10497.8 (\nu: 2.8)$
$A_{143}^{\text{dustEE}}$	0.1005	$0.100^{+0.014}_{-0.013}$	$D_{2000}$	230.63	$230.4^{+3.7}_{-3.5}$	$\chi_{\text{plik}}^2$	2431.6	$2451.4 (\nu: 23.9)$
$A_{143 \times 217}^{\text{dustEE}}$	0.222	$0.223^{+0.089}_{-0.092}$	$n_{\text{s},0.002}$	0.9662	$0.966^{+0.018}_{-0.017}$	$\chi_{\text{H070p6}}^2$	0.88	$1.03 (\nu: 0.4)$
$A_{217}^{\text{dustEE}}$	0.653	$0.65^{+0.26}_{-0.26}$	$Y_{\text{P}}$	0.2454	$0.2457^{+0.0052}_{-0.0052}$	$\chi_{\text{prior}}^2$	6.9	$19.4 (\nu: 15.2)$
$A_{100}^{\text{dustTE}}$	0.142	$0.141^{+0.074}_{-0.075}$	$Y_{\text{P}}^{\text{BBN}}$	0.2468	$0.2470^{+0.0052}_{-0.0052}$	$\chi_{\text{CMB}}^2$	12928.7	$12949.2 (\nu: 22.6)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.131^{+0.057}_{-0.058}$	$10^5 \text{D}/\text{H}$	2.610	$2.614^{+0.090}_{-0.089}$			

Best-fit  $\chi_{\text{eff}}^2 = 12936.50$ ;  $\bar{\chi}_{\text{eff}}^2 = 12969.57$ ;  $R - 1 = 0.00977$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10497.09 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.62 Hubble - H070p6: 0.88

### 11.10 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02220^{+0.00048}_{-0.00047}$	$A_{100 \times 217}^{\text{dust}TE}$	$0.30^{+0.16}_{-0.16}$	Age/Gyr	$13.87^{+0.43}_{-0.42}$
$\Omega_c h^2$	$0.1191^{+0.0061}_{-0.0061}$	$A_{143}^{\text{dust}TE}$	$0.15^{+0.11}_{-0.10}$	$z_*$	$1089.99^{+0.70}_{-0.70}$
$100\theta_{\text{MC}}$	$1.04087^{+0.00091}_{-0.00085}$	$A_{143 \times 217}^{\text{dust}TE}$	$0.34^{+0.16}_{-0.16}$	$r_*$	$145.1^{+3.8}_{-3.7}$
$\tau$	$0.079^{+0.033}_{-0.033}$	$A_{217}^{\text{dust}TE}$	$1.67^{+0.51}_{-0.50}$	$100\theta_*$	$1.0411^{+0.0011}_{-0.0011}$
$N_{\text{eff}}$	$2.99^{+0.41}_{-0.40}$	$c_{100}$	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	$13.94^{+0.35}_{-0.34}$
$\ln(10^{10} A_s)$	$3.090^{+0.071}_{-0.070}$	$c_{217}$	$0.9959^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	$1059.4^{+1.7}_{-1.7}$
$n_s$	$0.962^{+0.019}_{-0.019}$	$H_0$	$66.9^{+3.2}_{-3.1}$	$r_{\text{drag}}$	$147.8^{+4.0}_{-3.8}$
$y_{\text{cal}}$	$1.0004^{+0.0051}_{-0.0050}$	$\Omega_\Lambda$	$0.682^{+0.023}_{-0.023}$	$k_D$	$0.1402^{+0.0029}_{-0.0029}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$\Omega_m$	$0.318^{+0.023}_{-0.023}$	$100\theta_D$	$0.16080^{+0.00084}_{-0.00084}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\Omega_m h^2$	$0.1419^{+0.0064}_{-0.0063}$	$z_{\text{eq}}$	$3402^{+78}_{-78}$
$A_{143}^{\text{tSZ}}$	$5.4^{+3.8}_{-3.7}$	$\Omega_m h^3$	$0.0950^{+0.0082}_{-0.0077}$	$k_{\text{eq}}$	$0.01034^{+0.00024}_{-0.00024}$
$A_{100}^{\text{PS}}$	$259^{+60}_{-50}$	$\sigma_8$	$0.828^{+0.035}_{-0.034}$	$100\theta_{\text{eq}}$	$0.813^{+0.015}_{-0.015}$
$A_{143}^{\text{PS}}$	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	$0.467^{+0.019}_{-0.019}$	$100\theta_{\text{s,eq}}$	$0.4493^{+0.0077}_{-0.0075}$
$A_{143 \times 217}^{\text{PS}}$	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	$0.622^{+0.023}_{-0.022}$	$r_{\text{drag}}/D_V(0.57)$	$0.0713^{+0.0012}_{-0.0011}$
$A_{217}^{\text{PS}}$	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	$1.013^{+0.032}_{-0.031}$	$H(0.57)$	$92.5^{+3.1}_{-3.0}$
$A^{\text{kSZ}}$	$< 7.71$	$\langle d^2 \rangle^{1/2}$	$2.510^{+0.074}_{-0.073}$	$D_A(0.57)$	$1400^{+56}_{-55}$
$A_{100}^{\text{dust}TT}$	$7.4^{+3.6}_{-3.7}$	$z_{\text{re}}$	$9.97^{+2.8}_{-3.2}$	$F_{\text{AP}}(0.57)$	$0.6775^{+0.0058}_{-0.0057}$
$A_{143}^{\text{dust}TT}$	$8.9^{+3.5}_{-3.6}$	$10^9 A_s$	$2.20^{+0.16}_{-0.15}$	$f\sigma_8(0.57)$	$0.483^{+0.018}_{-0.017}$
$A_{143 \times 217}^{\text{dust}TT}$	$16.9^{+8.2}_{-8.2}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.036}_{-0.037}$	$\sigma_8(0.57)$	$0.615^{+0.029}_{-0.028}$
$A_{217}^{\text{dust}TT}$	$82^{+10}_{-10}$	$D_{40}$	$1245^{+32}_{-31}$	$f_{2000}^{143}$	$29^{+6}_{-6}$
$A_{100}^{\text{dust}EE}$	$0.081^{+0.011}_{-0.011}$	$D_{220}$	$5730^{+76}_{-77}$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dust}EE}$	$0.0486^{+0.0098}_{-0.0098}$	$D_{810}$	$2535^{+28}_{-28}$	$f_{2000}^{217}$	$105.6^{+4.0}_{-3.9}$
$A_{100 \times 217}^{\text{dust}EE}$	$0.0996^{+0.062}_{-0.063}$	$D_{1420}$	$815.0^{+9.8}_{-9.4}$	$\chi_{\text{lowTEB}}^2$	$10498.1 (\nu: 2.7)$
$A_{143}^{\text{dust}EE}$	$0.0999^{+0.014}_{-0.014}$	$D_{2000}$	$230.7^{+3.7}_{-3.6}$	$\chi_{\text{plik}}^2$	$2450.9 (\nu: 23.2)$
$A_{143 \times 217}^{\text{dust}EE}$	$0.224^{+0.090}_{-0.092}$	$n_{\text{s},0.002}$	$0.962^{+0.019}_{-0.019}$	$\chi_{\text{prior}}^2$	$19.2 (\nu: 15.0)$
$A_{217}^{\text{dust}EE}$	$0.65^{+0.26}_{-0.26}$	$Y_{\text{P}}$	$0.2445^{+0.0056}_{-0.0057}$	$\chi_{\text{CMB}}^2$	$12949.1 (\nu: 22.3)$
$A_{100}^{\text{dust}TE}$	$0.141^{+0.074}_{-0.075}$	$Y_{\text{P}}^{\text{BBN}}$	$0.2459^{+0.0057}_{-0.0057}$		
$A_{100 \times 143}^{\text{dust}TE}$	$0.131^{+0.057}_{-0.058}$	$10^5 \text{D/H}$	$2.603^{+0.091}_{-0.091}$		

$$\bar{\chi}_{\text{eff}}^2 = 12968.24; R - 1 = 0.00849$$

### 11.11 base\_nnu\_CamSpecHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02226	$0.02230^{+0.00074}_{-0.00070}$ (+0.0 $\sigma$ )	$\beta_1^1$	-0.13	$-0.1^{+2.0}_{-2.0}$	$r_*$	144.2	$144.2^{+5.3}_{-5.2}$ (+0.1 $\sigma$ )
$\Omega_c h^2$	0.1202	$0.1201^{+0.0080}_{-0.0077}$ (-0.1 $\sigma$ )	$H_0$	67.8	$68.0^{+5.5}_{-5.5}$ (+0.0 $\sigma$ )	$100\theta_*$	1.04102	$1.0411^{+0.0014}_{-0.0014}$ (+0.1 $\sigma$ )
$100\theta_{\text{MC}}$	1.04085	$1.0409^{+0.0011}_{-0.0011}$ (+0.1 $\sigma$ )	$\Omega_\Lambda$	0.6886	$0.690^{+0.038}_{-0.041}$ (+0.1 $\sigma$ )	$z_{\text{drag}}$	1059.70	$1059.8^{+2.5}_{-2.4}$ (-0.0 $\sigma$ )
$\tau$	0.0787	$0.081^{+0.045}_{-0.041}$ (+0.0 $\sigma$ )	$\Omega_m$	0.3114	$0.310^{+0.041}_{-0.038}$ (-0.1 $\sigma$ )	$r_{\text{drag}}$	146.9	$146.9^{+5.5}_{-5.4}$ (+0.1 $\sigma$ )
$N_{\text{eff}}$	3.10	$3.11^{+0.63}_{-0.62}$ (-0.0 $\sigma$ )	$\Omega_m h^2$	0.1431	$0.1430^{+0.0083}_{-0.0080}$ (-0.1 $\sigma$ )	$k_D$	0.14079	$0.1409^{+0.0040}_{-0.0039}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.090	$3.095^{+0.095}_{-0.087}$ (-0.0 $\sigma$ )	$\Omega_m h^3$	0.0970	$0.097^{+0.013}_{-0.012}$ (-0.0 $\sigma$ )	$100\theta_D$	0.16108	$0.1611^{+0.0014}_{-0.0013}$ (-0.1 $\sigma$ )
$n_s$	0.9692	$0.971^{+0.031}_{-0.029}$ (+0.1 $\sigma$ )	$\sigma_8$	0.8308	$0.833^{+0.046}_{-0.042}$ (-0.0 $\sigma$ )	$z_{\text{eq}}$	3380	$3375^{+140}_{-140}$ (-0.1 $\sigma$ )
$y_{\text{cal}}$	1.00013	$1.0003^{+0.0048}_{-0.0048}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4636	$0.463^{+0.026}_{-0.026}$ (-0.1 $\sigma$ )	$100\theta_{\text{eq}}$	0.8169	$0.818^{+0.028}_{-0.027}$ (+0.1 $\sigma$ )
$A_{100}^{\text{PS}}$	249.5	$246^{+40}_{-50}$ (-0.4 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6206	$0.621^{+0.027}_{-0.026}$ (-0.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07158	$0.0717^{+0.0022}_{-0.0021}$ (+0.1 $\sigma$ )
$A_{143}^{\text{PS}}$	36.2	$39^{+20}_{-20}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0091	$1.010^{+0.038}_{-0.037}$ (-0.1 $\sigma$ )	$H(0.57)$	93.29	$93.5^{+5.0}_{-4.9}$ (-0.0 $\sigma$ )
$A_{217}^{\text{PS}}$	96.3	$98^{+30}_{-30}$ (+0.1 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.486	$2.487^{+0.094}_{-0.096}$ (-0.2 $\sigma$ )	$D_A(0.57)$	1384	$1382^{+89}_{-89}$ (+0.0 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.5	$46^{+10}_{-10}$ (-2.7 $\sigma$ )	$z_{\text{re}}$	10.06	$10.2^{+3.7}_{-4.0}$ (+0.0 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6760	$0.676^{+0.010}_{-0.0099}$ (-0.1 $\sigma$ )
$A_{143}^{\text{tSZ}}$	3.26	< 6.66 (-1.0 $\sigma$ )	$10^9 A_s$	2.198	$2.21^{+0.21}_{-0.20}$ (-0.0 $\sigma$ )	$f\sigma_8(0.57)$	0.4830	$0.483^{+0.022}_{-0.021}$ (-0.1 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.422	$0.52^{+0.22}_{-0.21}$	$10^9 A_s e^{-2\tau}$	1.8775	$1.877^{+0.042}_{-0.044}$ (-0.3 $\sigma$ )	$\sigma_8(0.57)$	0.6180	$0.620^{+0.041}_{-0.037}$ (-0.0 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1226.6	$1226^{+43}_{-42}$ (-0.3 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.2469	$0.2470^{+0.0085}_{-0.0082}$ (-0.1 $\sigma$ )
$A^{\text{kSZ}}$	5.1	—	$D_{220}$	5695	$5698^{+80}_{-80}$ (-0.5 $\sigma$ )	$f_{2000}^{143}$	29.6	$29^{+7}_{-7}$ (-0.4 $\sigma$ )
$A_{100}^{\text{dust}}$	0.993	$0.99^{+0.37}_{-0.37}$	$D_{810}$	2529.2	$2531^{+27}_{-27}$ (-0.3 $\sigma$ )	$f_{2000}^{217}$	106.94	$106.6^{+4.7}_{-4.7}$ (+0.1 $\sigma$ )
$A_{143}^{\text{dust}}$	1.021	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	813.2	$814^{+10}_{-10}$ (+0.0 $\sigma$ )	$f_{2000}^{143 \times 217}$	32.1	$32^{+5}_{-5}$ (-0.3 $\sigma$ )
$A_{217}^{\text{dust}}$	1.225	$1.22^{+0.23}_{-0.23}$	$n_{s,0.002}$	0.9692	$0.971^{+0.031}_{-0.029}$ (+0.1 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10495.7	$10496.9$ ( $\nu$ : 3.8) (-0.2 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.970	$0.98^{+0.35}_{-0.35}$	$Y_{\text{P}}$	0.2456	$0.2457^{+0.0084}_{-0.0082}$ (-0.1 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	8045.2	$8060.4$ ( $\nu$ : 18.4)
$c_{100}$	0.99671	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	Age/Gyr	13.76	$13.75^{+0.63}_{-0.64}$ (+0.0 $\sigma$ )	$\chi_{\text{prior}}^2$	3.6	$8.4$ ( $\nu$ : 6.0) (+0.3 $\sigma$ )
$c_{217}$	0.99747	$0.9973^{+0.0035}_{-0.0035}$ (+0.9 $\sigma$ )	$z_*$	1090.11	$1090.1^{+1.0}_{-0.96}$ (-0.2 $\sigma$ )	$\chi_{\text{CMB}}^2$	18540.8	$18557.3$ ( $\nu$ : 17.0) (+1275.2 $\sigma$ )

Best-fit  $\chi_{\text{eff}}^2 = 18544.41$ ;  $\Delta\chi_{\text{eff}}^2 = 7282.47$ ;  $\bar{\chi}_{\text{eff}}^2 = 18565.65$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7282.63$ ;  $R - 1 = 0.00762$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.66 ( $\Delta$  -0.64) CamSpec like\_v9.10CMH\_unified: 8045.18

### 11.12 base\_nnu\_CamSpecHM\_TT\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00067}_{-0.00064} \quad (-0.0\sigma)$	$H_0$	$68.5^{+5.0}_{-4.6} \quad (-0.0\sigma)$	$z_{\text{drag}}$	$1060.0^{+2.3}_{-2.3} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1203^{+0.0080}_{-0.0077} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.694^{+0.033}_{-0.035} \quad (+0.0\sigma)$	$r_{\text{drag}}$	$146.5^{+5.3}_{-5.1} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.0409^{+0.0011}_{-0.0011} \quad (+0.1\sigma)$	$\Omega_{\text{m}}$	$0.306^{+0.035}_{-0.033} \quad (-0.0\sigma)$	$k_{\text{D}}$	$0.1411^{+0.0037}_{-0.0037} \quad (-0.1\sigma)$
$\tau$	$0.084^{+0.043}_{-0.040} \quad (+0.0\sigma)$	$\Omega_{\text{m}} h^2$	$0.1433^{+0.0082}_{-0.0079} \quad (-0.1\sigma)$	$100\theta_{\text{D}}$	$0.1611^{+0.0013}_{-0.0013} \quad (-0.1\sigma)$
$N_{\text{eff}}$	$3.16^{+0.59}_{-0.56} \quad (-0.1\sigma)$	$\Omega_{\text{m}} h^3$	$0.098^{+0.012}_{-0.011} \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3360^{+120}_{-120} \quad (-0.0\sigma)$
$\ln(10^{10} A_{\text{s}})$	$3.101^{+0.090}_{-0.085} \quad (-0.1\sigma)$	$\sigma_8$	$0.835^{+0.045}_{-0.041} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.821^{+0.024}_{-0.024} \quad (+0.0\sigma)$
$n_{\text{s}}$	$0.974^{+0.027}_{-0.026} \quad (+0.1\sigma)$	$\sigma_8 \Omega_{\text{m}}^{0.5}$	$0.462^{+0.025}_{-0.024} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_{\text{V}}(0.57)$	$0.0719^{+0.0019}_{-0.0018} \quad (+0.0\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0048}_{-0.0047} \quad (-0.0\sigma)$	$\sigma_8 \Omega_{\text{m}}^{0.25}$	$0.621^{+0.028}_{-0.027} \quad (-0.1\sigma)$	$H(0.57)$	$93.9^{+4.5}_{-4.3} \quad (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$247^{+50}_{-50} \quad (-0.5\sigma)$	$\sigma_8/h^{0.5}$	$1.009^{+0.038}_{-0.038} \quad (-0.1\sigma)$	$D_{\text{A}}(0.57)$	$1373^{+81}_{-79} \quad (+0.0\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.482^{+0.091}_{-0.094} \quad (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6745^{+0.0088}_{-0.0085} \quad (-0.0\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$10.4^{+3.5}_{-3.8} \quad (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.484^{+0.022}_{-0.021} \quad (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_{\text{s}}$	$2.22^{+0.20}_{-0.20} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.623^{+0.038}_{-0.035} \quad (-0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.66 \quad (-0.9\sigma)$	$10^9 A_{\text{s}} e^{-2\tau}$	$1.879^{+0.041}_{-0.043} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.2477^{+0.0077}_{-0.0078} \quad (-0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.20}$	$D_{40}$	$1223^{+40}_{-38} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+7}_{-7} \quad (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5699^{+80}_{-79} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.7^{+4.6}_{-4.6} \quad (+0.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2531^{+27}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-5} \quad (-0.3\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$D_{1420}$	$814^{+10}_{-10} \quad (-0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.6 \quad (\nu: 3.7) \quad (-0.2\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.35}$	$n_{\text{s},0.002}$	$0.974^{+0.027}_{-0.026} \quad (+0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8060.5 \quad (\nu: 18.5)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.2464^{+0.0077}_{-0.0078} \quad (-0.2\sigma)$	$\chi_{\text{JLA}}^2$	$706.86 \quad (\nu: 0.1) \quad (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$\text{Age}/\text{Gyr}$	$13.69^{+0.60}_{-0.58} \quad (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.0) \quad (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$z_*$	$1090.0^{+1.0}_{-0.97} \quad (-0.2\sigma)$	$\chi_{\text{CMB}}^2$	$18557.1 \quad (\nu: 16.8) \quad (+954.7\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$r_*$	$143.9^{+5.1}_{-4.9} \quad (+0.1\sigma)$		
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	$1.0410^{+0.0014}_{-0.0013} \quad (+0.2\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 19272.38; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.51; R - 1 = 0.01011$$

### 11.13 base\_nnu\_CamSpecHM\_TT\_lowTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00074}_{-0.00070} \quad (+0.0\sigma)$	$H_0$	$68.4^{+5.6}_{-5.1} \quad (-0.0\sigma)$	$z_{\text{drag}}$	$1059.8^{+2.4}_{-2.4} \quad (-0.0\sigma)$
$\Omega_c h^2$	$0.1191^{+0.0078}_{-0.0077} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.696^{+0.036}_{-0.039} \quad (+0.0\sigma)$	$r_{\text{drag}}$	$147.2^{+5.6}_{-5.3} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.0410^{+0.0011}_{-0.0011} \quad (+0.1\sigma)$	$\Omega_m$	$0.304^{+0.039}_{-0.036} \quad (-0.0\sigma)$	$k_D$	$0.1406^{+0.0039}_{-0.0039} \quad (-0.1\sigma)$
$\tau$	$0.071^{+0.039}_{-0.038} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1420^{+0.0081}_{-0.0080} \quad (-0.1\sigma)$	$100\theta_D$	$0.1611^{+0.0014}_{-0.0013} \quad (-0.1\sigma)$
$N_{\text{eff}}$	$3.11^{+0.62}_{-0.59} \quad (-0.1\sigma)$	$\Omega_m h^3$	$0.097^{+0.012}_{-0.012} \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3353^{+130}_{-130} \quad (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.072^{+0.082}_{-0.079} \quad (+0.0\sigma)$	$\sigma_8$	$0.820^{+0.039}_{-0.036} \quad (+0.0\sigma)$	$100\theta_{\text{eq}}$	$0.823^{+0.027}_{-0.025} \quad (+0.0\sigma)$
$n_s$	$0.972^{+0.030}_{-0.029} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.018}_{-0.017} \quad (+0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0720^{+0.0021}_{-0.0020} \quad (+0.0\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0048}_{-0.0046} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.018}_{-0.018} \quad (+0.0\sigma)$	$H(0.57)$	$93.6^{+5.0}_{-4.6} \quad (-0.0\sigma)$
$A_{100}^{\text{PS}}$	$248^{+50}_{-50} \quad (-0.5\sigma)$	$\sigma_8/h^{0.5}$	$0.992^{+0.022}_{-0.022} \quad (+0.1\sigma)$	$D_A(0.57)$	$1377^{+88}_{-88} \quad (+0.0\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.444^{+0.058}_{-0.059} \quad (-0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.6742^{+0.0097}_{-0.0094} \quad (-0.0\sigma)$
$A_{217}^{\text{PS}}$	$96^{+30}_{-30} \quad (+0.0\sigma)$	$z_{\text{re}}$	$9.2^{+3.4}_{-3.8} \quad (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.475^{+0.015}_{-0.015} \quad (+0.0\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s$	$2.16^{+0.18}_{-0.17} \quad (+0.0\sigma)$	$\sigma_8(0.57)$	$0.612^{+0.038}_{-0.034} \quad (+0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.57 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.042}_{-0.043} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.2470^{+0.0081}_{-0.0083} \quad (-0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{40}$	$1217^{+40}_{-37} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$30^{+7}_{-6} \quad (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5697^{+81}_{-77} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.8^{+4.6}_{-4.6} \quad (+0.0\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2529^{+27}_{-26} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-5} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$D_{1420}$	$814^{+10}_{-9.7} \quad (-0.0\sigma)$	$\chi_{\text{lensing}}^2$	$9.9 \quad (\nu: 1.0) \quad (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.37}_{-0.36}$	$n_{\text{s},0.002}$	$0.972^{+0.030}_{-0.029} \quad (+0.1\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.3 \quad (\nu: 1.8) \quad (-0.2\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.2457^{+0.0081}_{-0.0083} \quad (-0.2\sigma)$	$\chi_{\text{CamSpec}}^2$	$8062.0 \quad (\nu: 17.6)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$\text{Age}/\text{Gyr}$	$13.74^{+0.63}_{-0.63} \quad (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 5.8) \quad (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.5\sigma)$	$z_*$	$1089.94^{+0.96}_{-0.93} \quad (-0.2\sigma)$	$\chi_{\text{CMB}}^2$	$18567.1 \quad (\nu: 17.3) \quad (+1174.0\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$r_*$	$144.5^{+5.4}_{-5.0} \quad (+0.1\sigma)$		
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.0412^{+0.0015}_{-0.0014} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18575.50; \Delta\bar{\chi}_{\text{eff}}^2 = 7281.91; R - 1 = 0.02320$$

### 11.14 base\_nnu\_CamSpecHM\_TT\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02243^{+0.00060}_{-0.00060} (+0.0\sigma)$	$H_0$	$69.0^{+4.3}_{-4.2} (+0.0\sigma)$	$z_{\text{drag}}$	$1060.3^{+2.0}_{-2.0} (-0.0\sigma)$
$\Omega_c h^2$	$0.1210^{+0.0075}_{-0.0073} (-0.1\sigma)$	$\Omega_\Lambda$	$0.697^{+0.030}_{-0.033} (+0.1\sigma)$	$r_{\text{drag}}$	$146.0^{+4.6}_{-4.4} (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.0408^{+0.0010}_{-0.0011} (+0.1\sigma)$	$\Omega_m$	$0.303^{+0.033}_{-0.030} (-0.1\sigma)$	$k_D$	$0.1415^{+0.0033}_{-0.0033} (-0.1\sigma)$
$\tau$	$0.086^{+0.042}_{-0.040} (+0.0\sigma)$	$\Omega_m h^2$	$0.1441^{+0.0077}_{-0.0075} (-0.1\sigma)$	$100\theta_D$	$0.1613^{+0.0012}_{-0.0012} (-0.1\sigma)$
$N_{\text{eff}}$	$3.22^{+0.51}_{-0.49} (-0.0\sigma)$	$\Omega_m h^3$	$0.0995^{+0.010}_{-0.0097} (-0.0\sigma)$	$z_{\text{eq}}$	$3350^{+120}_{-110} (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.107^{+0.086}_{-0.083} (-0.0\sigma)$	$\sigma_8$	$0.839^{+0.042}_{-0.039} (-0.0\sigma)$	$100\theta_{\text{eq}}$	$0.823^{+0.022}_{-0.022} (+0.1\sigma)$
$n_s$	$0.976^{+0.024}_{-0.024} (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.461^{+0.025}_{-0.025} (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0721^{+0.0018}_{-0.0017} (+0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0048}_{-0.0047} (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.622^{+0.028}_{-0.026} (-0.1\sigma)$	$H(0.57)$	$94.4^{+3.9}_{-3.8} (-0.0\sigma)$
$A_{100}^{\text{PS}}$	$248^{+40}_{-50} (-0.5\sigma)$	$\sigma_8/h^{0.5}$	$1.009^{+0.039}_{-0.038} (-0.1\sigma)$	$D_A(0.57)$	$1364^{+72}_{-68} (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.479^{+0.091}_{-0.092} (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6738^{+0.0083}_{-0.0078} (-0.1\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} (+0.0\sigma)$	$z_{\text{re}}$	$10.6^{+3.7}_{-3.7} (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.485^{+0.022}_{-0.020} (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} (-2.7\sigma)$	$10^9 A_s$	$2.24^{+0.20}_{-0.18} (-0.0\sigma)$	$\sigma_8(0.57)$	$0.626^{+0.035}_{-0.033} (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.61 (-0.9\sigma)$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.038}_{-0.040} (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.2486^{+0.0066}_{-0.0068} (-0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.20}$	$D_{40}$	$1220^{+37}_{-36} (-0.4\sigma)$	$f_{2000}^{143}$	$30^{+7}_{-7} (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5700^{+82}_{-79} (-0.5\sigma)$	$f_{2000}^{217}$	$106.9^{+4.5}_{-4.5} (+0.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2532^{+27}_{-27} (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-5} (-0.3\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$D_{1420}$	$814^{+10}_{-10} (-0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.4 (\nu: 3.6) (-0.2\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.35}$	$n_{\text{s},0.002}$	$0.976^{+0.024}_{-0.024} (+0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8060.8 (\nu: 18.4)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.2472^{+0.0066}_{-0.0068} (-0.2\sigma)$	$\chi_{\text{H070p6}}^2$	$0.64 (\nu: 0.3) (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.36}_{-0.35}$	$\text{Age}/\text{Gyr}$	$13.63^{+0.52}_{-0.50} (+0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.4 (\nu: 6.0) (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	$z_*$	$1090.1^{+1.0}_{-0.98} (-0.2\sigma)$	$\chi_{\text{CMB}}^2$	$18557.1 (\nu: 16.7) (+1260.1\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0035} (+0.9\sigma)$	$r_*$	$143.3^{+4.5}_{-4.3} (+0.1\sigma)$		
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	$1.0409^{+0.0013}_{-0.0013} (+0.2\sigma)$		

$\bar{\chi}_{\text{eff}}^2 = 18566.14$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7282.57$ ;  $R - 1 = 0.01071$

### 11.15 base\_nnu\_CamSpecHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00073}_{-0.00069} \quad (+0.0\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_*$	$144.1^{+5.3}_{-5.1} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1201^{+0.0080}_{-0.0076} \quad (-0.1\sigma)$	$H_0$	$68.1^{+5.4}_{-5.4} \quad (+0.0\sigma)$	$100\theta_*$	$1.0411^{+0.0014}_{-0.0014} \quad (+0.2\sigma)$
$100\theta_{MC}$	$1.0409^{+0.0011}_{-0.0011} \quad (+0.2\sigma)$	$\Omega_\Lambda$	$0.691^{+0.038}_{-0.040} \quad (+0.1\sigma)$	$z_{drag}$	$1059.9^{+2.4}_{-2.4} \quad (-0.0\sigma)$
$\tau$	$0.083^{+0.039}_{-0.038} \quad (+0.0\sigma)$	$\Omega_m$	$0.309^{+0.040}_{-0.038} \quad (-0.1\sigma)$	$r_{drag}$	$146.8^{+5.5}_{-5.4} \quad (+0.1\sigma)$
$N_{eff}$	$3.12^{+0.62}_{-0.62} \quad (-0.0\sigma)$	$\Omega_m h^2$	$0.1431^{+0.0083}_{-0.0080} \quad (-0.1\sigma)$	$k_D$	$0.1409^{+0.0039}_{-0.0039} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.099^{+0.087}_{-0.084} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.098^{+0.012}_{-0.012} \quad (-0.0\sigma)$	$100\theta_D$	$0.1611^{+0.0014}_{-0.0013} \quad (-0.1\sigma)$
$n_s$	$0.971^{+0.030}_{-0.029} \quad (+0.1\sigma)$	$\sigma_8$	$0.834^{+0.044}_{-0.041} \quad (-0.1\sigma)$	$z_{eq}$	$3372^{+140}_{-140} \quad (-0.1\sigma)$
$y_{cal}$	$1.0003^{+0.0048}_{-0.0047} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.463^{+0.026}_{-0.026} \quad (-0.1\sigma)$	$100\theta_{eq}$	$0.819^{+0.028}_{-0.026} \quad (+0.1\sigma)$
$A_{100}^{PS}$	$246^{+50}_{-50} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.622^{+0.027}_{-0.025} \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.0718^{+0.0021}_{-0.0021} \quad (+0.1\sigma)$
$A_{143}^{PS}$	$39^{+20}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.011^{+0.038}_{-0.036} \quad (-0.1\sigma)$	$H(0.57)$	$93.6^{+4.9}_{-4.9} \quad (-0.0\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.488^{+0.093}_{-0.094} \quad (-0.2\sigma)$	$D_A(0.57)$	$1380^{+87}_{-88} \quad (+0.0\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$z_{re}$	$10.4^{+3.3}_{-3.7} \quad (+0.0\sigma)$	$F_{AP}(0.57)$	$0.6754^{+0.0099}_{-0.0098} \quad (-0.1\sigma)$
$A_{143}^{tSZ}$	$< 6.69 \quad (-1.0\sigma)$	$10^9 A_s$	$2.22^{+0.19}_{-0.18} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.484^{+0.021}_{-0.019} \quad (-0.1\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.21}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.042}_{-0.044} \quad (-0.3\sigma)$	$\sigma_8(0.57)$	$0.621^{+0.039}_{-0.037} \quad (-0.0\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{40}$	$1226^{+43}_{-42} \quad (-0.3\sigma)$	$Y_P^{BBN}$	$0.2472^{+0.0084}_{-0.0081} \quad (-0.1\sigma)$
$A^{kSZ}$	—	$D_{220}$	$5698^{+80}_{-80} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$29^{+7}_{-7} \quad (-0.4\sigma)$
$A_{100}^{dust}$	$0.99^{+0.37}_{-0.38}$	$D_{810}$	$2531^{+27}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$106.6^{+4.7}_{-4.6} \quad (+0.1\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.35}$	$D_{1420}$	$814^{+10}_{-10} \quad (+0.0\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-5} \quad (-0.3\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.971^{+0.030}_{-0.029} \quad (+0.1\sigma)$	$\chi_{lowTEB}^2$	$10496.8 \quad (\nu: 3.8) \quad (-0.2\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$Y_P$	$0.2459^{+0.0083}_{-0.0081} \quad (-0.1\sigma)$	$\chi_{CamSpec}^2$	$8060.3 \quad (\nu: 18.4)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	Age/Gyr	$13.73^{+0.63}_{-0.63} \quad (+0.0\sigma)$	$\chi_{prior}^2$	$8.4 \quad (\nu: 5.9) \quad (+0.3\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$z_*$	$1090.0^{+1.0}_{-0.97} \quad (-0.2\sigma)$	$\chi_{CMB}^2$	$18557.1 \quad (\nu: 16.9) \quad (+933.9\sigma)$

$$\bar{\chi}_{eff}^2 = 18565.51; \Delta\bar{\chi}_{eff}^2 = 7282.56; R - 1 = 0.00937$$



## 11.16 base\_nnu\_CamSpecHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022174	$0.02219^{+0.00046}_{-0.00045}$ $(-0.0\sigma)$	$\mathcal{C}_{EE}$	0.9982	$0.9987^{+0.0094}_{-0.0092}$	$r_*$	146.94	$146.8^{+4.1}_{-4.0}$ $(+0.8\sigma)$
$\Omega_c h^2$	0.1158	$0.1161^{+0.0064}_{-0.0062}$ $(-1.0\sigma)$	$\beta_1^1$	0.00	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	1.04159	$1.0416^{+0.0012}_{-0.0011}$ $(+0.8\sigma)$
$100\theta_{MC}$	1.04122	$1.04120^{+0.00093}_{-0.00091}$ $(+0.7\sigma)$	$H_0$	65.92	$66.1^{+3.3}_{-3.2}$ $(-0.5\sigma)$	$z_{drag}$	1058.98	$1059.0^{+1.7}_{-1.6}$ $(-0.4\sigma)$
$\tau$	0.0736	$0.074^{+0.035}_{-0.034}$ $(-0.2\sigma)$	$\Omega_\Lambda$	0.6809	$0.682^{+0.022}_{-0.023}$ $(-0.0\sigma)$	$r_{drag}$	149.70	$149.5^{+4.2}_{-4.2}$ $(+0.8\sigma)$
$N_{eff}$	2.802	$2.83^{+0.44}_{-0.41}$ $(-0.8\sigma)$	$\Omega_m$	0.3191	$0.318^{+0.023}_{-0.022}$ $(+0.0\sigma)$	$k_D$	0.13897	$0.1391^{+0.0030}_{-0.0029}$ $(-0.7\sigma)$
$\ln(10^{10} A_s)$	3.069	$3.069^{+0.073}_{-0.073}$ $(-0.5\sigma)$	$\Omega_m h^2$	0.1386	$0.1389^{+0.0066}_{-0.0064}$ $(-0.9\sigma)$	$100\theta_D$	0.16025	$0.16031^{+0.00098}_{-0.00095}$ $(-1.1\sigma)$
$n_s$	0.9588	$0.960^{+0.019}_{-0.019}$ $(-0.3\sigma)$	$\Omega_m h^3$	0.0914	$0.0919^{+0.0085}_{-0.0078}$ $(-0.7\sigma)$	$z_{eq}$	3409	$3406^{+79}_{-80}$ $(+0.1\sigma)$
$y_{cal}$	1.00041	$1.0002^{+0.0048}_{-0.0049}$ $(-0.1\sigma)$	$\sigma_8$	0.8138	$0.814^{+0.035}_{-0.034}$ $(-0.7\sigma)$	$100\theta_{eq}$	0.8116	$0.812^{+0.015}_{-0.015}$ $(-0.1\sigma)$
$A_{100}^{PS}$	239.0	$239^{+40}_{-50}$ $(-0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4597	$0.459^{+0.019}_{-0.019}$ $(-0.7\sigma)$	$r_{drag}/D_V(0.57)$	0.07121	$0.0713^{+0.0012}_{-0.0011}$ $(+0.0\sigma)$
$A_{143}^{PS}$	35.2	$36^{+20}_{-20}$ $(-0.9\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.6116	$0.612^{+0.023}_{-0.023}$ $(-0.8\sigma)$	$H(0.57)$	91.24	$91.4^{+3.2}_{-3.1}$ $(-0.7\sigma)$
$A_{217}^{PS}$	101.7	$100^{+30}_{-30}$ $(+0.2\sigma)$	$\sigma_8/h^{0.5}$	1.0024	$1.002^{+0.033}_{-0.033}$ $(-0.6\sigma)$	$D_A(0.57)$	1419	$1416^{+59}_{-58}$ $(+0.6\sigma)$
$A_{217}^{CIB}$	44.8	$44^{+10}_{-10}$ $(-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	2.491	$2.488^{+0.077}_{-0.081}$ $(-0.5\sigma)$	$F_{AP}(0.57)$	0.6779	$0.6778^{+0.0057}_{-0.0056}$ $(+0.0\sigma)$
$A_{143}^{tSZ}$	4.29	$< 7.03$ $(-0.9\sigma)$	$z_{re}$	9.49	$9.4^{+3.3}_{-3.3}$ $(-0.3\sigma)$	$f\sigma_8(0.57)$	0.4751	$0.475^{+0.018}_{-0.018}$ $(-0.8\sigma)$
$r_{143 \times 217}^{PS}$	0.499	$0.52^{+0.24}_{-0.23}$	$10^9 A_s$	2.153	$2.15^{+0.16}_{-0.15}$ $(-0.5\sigma)$	$\sigma_8(0.57)$	0.6036	$0.604^{+0.029}_{-0.028}$ $(-0.7\sigma)$
$\xi^{tSZ \times CIB}$	0.19	—	$10^9 A_s e^{-2\tau}$	1.8579	$1.858^{+0.037}_{-0.037}$ $(-1.1\sigma)$	$Y_P^{BBN}$	0.2429	$0.2432^{+0.0060}_{-0.0059}$ $(-0.9\sigma)$
$A^{kSZ}$	2.9	—	$D_{40}$	1239.0	$1238^{+31}_{-32}$ $(-0.4\sigma)$	$f_{2000}^{143}$	26.7	$27^{+6}_{-6}$ $(-0.8\sigma)$
$A_{100}^{dust}$	0.984	$0.98^{+0.37}_{-0.38}$	$D_{220}$	5712	$5709^{+77}_{-76}$ $(-0.5\sigma)$	$f_{2000}^{217}$	104.72	$104.9^{+4.2}_{-4.2}$ $(-0.4\sigma)$
$A_{143}^{dust}$	1.021	$1.02^{+0.36}_{-0.36}$	$D_{810}$	2528.4	$2527^{+27}_{-27}$ $(-0.6\sigma)$	$f_{2000}^{143 \times 217}$	29.72	$30^{+5}_{-5}$ $(-1.0\sigma)$
$A_{217}^{dust}$	1.221	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	816.7	$816.1^{+9.8}_{-9.5}$ $(+0.2\sigma)$	$\chi_{lowTEB}^2$	10496.81	$10497.5 (\nu: 2.4)$ $(-0.3\sigma)$
$A_{143 \times 217}^{dust}$	0.977	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	0.9588	$0.960^{+0.019}_{-0.019}$ $(-0.3\sigma)$	$\chi_{CamSpec}^2$	12934.2	$12951.2 (\nu: 19.5)$
$c_{100}$	0.99680	$0.9968^{+0.0019}_{-0.0019}$ $(-1.8\sigma)$	$Y_P$	0.2416	$0.2419^{+0.0060}_{-0.0059}$ $(-0.9\sigma)$	$\chi_{prior}^2$	3.3	$9.0 (\nu: 6.3)$ $(-1.9\sigma)$
$c_{217}$	0.99674	$0.9969^{+0.0035}_{-0.0035}$ $(+0.6\sigma)$	Age/Gyr	14.051	$14.03^{+0.45}_{-0.44}$ $(+0.7\sigma)$	$\chi_{CMB}^2$	23431.0	$23448.7 (\nu: 18.4)$ $(+1553.7\sigma)$
$c_{TE}$	1.0032	$1.0033^{+0.0089}_{-0.0089}$	$z_*$	1089.54	$1089.57^{+0.75}_{-0.76}$ $(-1.2\sigma)$			

Best-fit  $\chi_{eff}^2 = 23434.36$ ;  $\Delta\chi_{eff}^2 = 10499.12$ ;  $\bar{\chi}_{eff}^2 = 23457.66$ ;  $\Delta\bar{\chi}_{eff}^2 = 10489.28$ ;  $R - 1 = 0.00681$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.81 ( $\Delta$  -0.72) CamSpec like\_v9.10CMH\_unified: 12934.24

### 11.17 base\_nnu\_CamSpecHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02222^{+0.00044}_{-0.00043} \quad (-0.1\sigma)$	$c_{EE}$	$0.9990^{+0.0094}_{-0.0092}$	$r_*$	$146.5^{+4.0}_{-3.9} \quad (+0.8\sigma)$
$\Omega_c h^2$	$0.1163^{+0.0063}_{-0.0061} \quad (-0.9\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.0415^{+0.0012}_{-0.0011} \quad (+0.8\sigma)$
$100\theta_{MC}$	$1.04117^{+0.00091}_{-0.00090} \quad (+0.7\sigma)$	$H_0$	$66.4^{+3.1}_{-3.0} \quad (-0.5\sigma)$	$z_{drag}$	$1059.2^{+1.6}_{-1.6} \quad (-0.5\sigma)$
$\tau$	$0.075^{+0.035}_{-0.035} \quad (-0.2\sigma)$	$\Omega_\Lambda$	$0.684^{+0.021}_{-0.022} \quad (-0.0\sigma)$	$r_{drag}$	$149.3^{+4.2}_{-4.1} \quad (+0.8\sigma)$
$N_{eff}$	$2.86^{+0.42}_{-0.40} \quad (-0.8\sigma)$	$\Omega_m$	$0.316^{+0.022}_{-0.021} \quad (+0.0\sigma)$	$k_D$	$0.1393^{+0.0029}_{-0.0028} \quad (-0.7\sigma)$
$\ln(10^{10} A_s)$	$3.073^{+0.073}_{-0.072} \quad (-0.5\sigma)$	$\Omega_m h^2$	$0.1392^{+0.0065}_{-0.0063} \quad (-0.9\sigma)$	$100\theta_D$	$0.16036^{+0.00097}_{-0.00093} \quad (-1.1\sigma)$
$n_s$	$0.961^{+0.018}_{-0.018} \quad (-0.3\sigma)$	$\Omega_m h^3$	$0.0924^{+0.0082}_{-0.0077} \quad (-0.8\sigma)$	$z_{eq}$	$3398^{+76}_{-76} \quad (+0.1\sigma)$
$y_{cal}$	$1.0002^{+0.0048}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8$	$0.816^{+0.034}_{-0.034} \quad (-0.7\sigma)$	$100\theta_{eq}$	$0.814^{+0.015}_{-0.014} \quad (-0.1\sigma)$
$A_{100}^{PS}$	$239^{+40}_{-50} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.019}_{-0.019} \quad (-0.7\sigma)$	$r_{drag}/D_V(0.57)$	$0.0714^{+0.0011}_{-0.0011} \quad (-0.0\sigma)$
$A_{143}^{PS}$	$36^{+20}_{-20} \quad (-0.9\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.612^{+0.023}_{-0.023} \quad (-0.8\sigma)$	$H(0.57)$	$91.7^{+3.1}_{-3.0} \quad (-0.7\sigma)$
$A_{217}^{PS}$	$100^{+30}_{-30} \quad (+0.2\sigma)$	$\sigma_8/h^{0.5}$	$1.001^{+0.033}_{-0.033} \quad (-0.6\sigma)$	$D_A(0.57)$	$1411^{+56}_{-55} \quad (+0.6\sigma)$
$A_{217}^{CIB}$	$44^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.486^{+0.077}_{-0.082} \quad (-0.5\sigma)$	$F_{AP}(0.57)$	$0.6771^{+0.0054}_{-0.0053} \quad (+0.0\sigma)$
$A_{143}^{tSZ}$	$< 7.01 \quad (-0.9\sigma)$	$z_{re}$	$9.6^{+3.0}_{-3.3} \quad (-0.3\sigma)$	$f\sigma_8(0.57)$	$0.475^{+0.018}_{-0.018} \quad (-0.8\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.24}_{-0.23}$	$10^9 A_s$	$2.16^{+0.16}_{-0.15} \quad (-0.5\sigma)$	$\sigma_8(0.57)$	$0.606^{+0.029}_{-0.028} \quad (-0.7\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.859^{+0.037}_{-0.037} \quad (-1.1\sigma)$	$Y_P^{BBN}$	$0.2436^{+0.0058}_{-0.0058} \quad (-0.9\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1236^{+31}_{-31} \quad (-0.4\sigma)$	$f_{2000}^{143}$	$27^{+6}_{-6} \quad (-0.8\sigma)$
$A_{100}^{dust}$	$0.98^{+0.37}_{-0.37}$	$D_{220}$	$5710^{+77}_{-76} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$104.9^{+4.2}_{-4.2} \quad (-0.4\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2527^{+27}_{-27} \quad (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+5}_{-5} \quad (-0.9\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	$816.0^{+9.9}_{-9.6} \quad (+0.2\sigma)$	$\chi_{lowTEB}^2$	$10497.4 \quad (\nu: 2.4) \quad (-0.3\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.961^{+0.018}_{-0.018} \quad (-0.3\sigma)$	$\chi_{CamSpec}^2$	$12951.3 \quad (\nu: 20.1)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0018} \quad (-1.8\sigma)$	$Y_P$	$0.2423^{+0.0058}_{-0.0057} \quad (-0.9\sigma)$	$\chi_{JLA}^2$	$706.99 \quad (\nu: 0.1) \quad (+0.0\sigma)$
$c_{217}$	$0.9969^{+0.0035}_{-0.0035} \quad (+0.6\sigma)$	$Age/Gyr$	$14.00^{+0.44}_{-0.43} \quad (+0.7\sigma)$	$\chi_{prior}^2$	$8.9 \quad (\nu: 6.2) \quad (-1.9\sigma)$
$c_{TE}$	$1.0034^{+0.0090}_{-0.0090}$	$z_*$	$1089.57^{+0.75}_{-0.76} \quad (-1.1\sigma)$	$\chi_{CMB}^2$	$23448.7 \quad (\nu: 18.6) \quad (+1564.1\sigma)$

$$\bar{\chi}_{eff}^2 = 24164.59; \Delta\bar{\chi}_{eff}^2 = 10489.26; R - 1 = 0.00732$$

### 11.18 base\_nnu\_CamSpecHM\_TTTEEE\_lowTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02216^{+0.00045}_{-0.00045} (+0.0\sigma)$	$c_{EE}$	$0.9989^{+0.0094}_{-0.0091}$	$r_*$	$147.1^{+4.1}_{-4.0} (+0.7\sigma)$
$\Omega_c h^2$	$0.1155^{+0.0063}_{-0.0062} (-0.8\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	$1.0417^{+0.0012}_{-0.0012} (+0.6\sigma)$
$100\theta_{MC}$	$1.04128^{+0.00092}_{-0.00091} (+0.6\sigma)$	$H_0$	$66.1^{+3.2}_{-3.2} (-0.4\sigma)$	$z_{drag}$	$1058.9^{+1.6}_{-1.6} (-0.3\sigma)$
$\tau$	$0.062^{+0.027}_{-0.027} (+0.1\sigma)$	$\Omega_\Lambda$	$0.683^{+0.023}_{-0.023} (-0.1\sigma)$	$r_{drag}$	$149.8^{+4.3}_{-4.2} (+0.7\sigma)$
$N_{eff}$	$2.80^{+0.43}_{-0.41} (-0.7\sigma)$	$\Omega_m$	$0.317^{+0.023}_{-0.023} (+0.1\sigma)$	$k_D$	$0.1388^{+0.0030}_{-0.0029} (-0.6\sigma)$
$\ln(10^{10} A_s)$	$3.043^{+0.057}_{-0.056} (-0.2\sigma)$	$\Omega_m h^2$	$0.1383^{+0.0065}_{-0.0064} (-0.8\sigma)$	$100\theta_D$	$0.16029^{+0.00097}_{-0.00095} (-1.0\sigma)$
$n_s$	$0.959^{+0.019}_{-0.019} (-0.2\sigma)$	$\Omega_m h^3$	$0.0914^{+0.0085}_{-0.0077} (-0.6\sigma)$	$z_{eq}$	$3401^{+79}_{-78} (+0.1\sigma)$
$y_{cal}$	$1.0000^{+0.0047}_{-0.0049} (-0.1\sigma)$	$\sigma_8$	$0.802^{+0.027}_{-0.026} (-0.5\sigma)$	$100\theta_{eq}$	$0.813^{+0.015}_{-0.015} (-0.1\sigma)$
$A_{100}^{PS}$	$240^{+40}_{-50} (-0.8\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.013}_{-0.014} (-0.4\sigma)$	$r_{drag}/D_V(0.57)$	$0.0713^{+0.0011}_{-0.0011} (-0.1\sigma)$
$A_{143}^{PS}$	$36^{+20}_{-20} (-0.9\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.016}_{-0.016} (-0.6\sigma)$	$H(0.57)$	$91.3^{+3.2}_{-3.0} (-0.6\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} (+0.2\sigma)$	$\sigma_8/h^{0.5}$	$0.987^{+0.021}_{-0.021} (-0.3\sigma)$	$D_A(0.57)$	$1418^{+59}_{-57} (+0.5\sigma)$
$A_{217}^{CIB}$	$44^{+10}_{-10} (-3.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.455^{+0.052}_{-0.053} (-0.2\sigma)$	$F_{AP}(0.57)$	$0.6775^{+0.0057}_{-0.0054} (+0.1\sigma)$
$A_{143}^{tSZ}$	$< 7.07 (-0.9\sigma)$	$z_{re}$	$8.3^{+2.7}_{-2.7} (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.468^{+0.013}_{-0.013} (-0.5\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.22}$	$10^9 A_s$	$2.10^{+0.12}_{-0.11} (-0.2\sigma)$	$\sigma_8(0.57)$	$0.596^{+0.024}_{-0.023} (-0.4\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.854^{+0.037}_{-0.037} (-0.9\sigma)$	$Y_P^{BBN}$	$0.2429^{+0.0060}_{-0.0059} (-0.8\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1233^{+30}_{-31} (-0.3\sigma)$	$f_{2000}^{143}$	$27^{+6}_{-6} (-0.9\sigma)$
$A_{100}^{dust}$	$0.98^{+0.38}_{-0.37}$	$D_{220}$	$5706^{+77}_{-77} (-0.5\sigma)$	$f_{2000}^{217}$	$105.0^{+4.2}_{-4.3} (-0.4\sigma)$
$A_{143}^{dust}$	$1.03^{+0.36}_{-0.36}$	$D_{810}$	$2526^{+26}_{-27} (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+5}_{-5} (-1.0\sigma)$
$A_{217}^{dust}$	$1.22^{+0.22}_{-0.22}$	$D_{1420}$	$815.9^{+9.7}_{-9.5} (+0.2\sigma)$	$\chi_{lensing}^2$	$9.7 (\nu: 1.0) (-0.3\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.34}$	$n_{s,0.002}$	$0.959^{+0.019}_{-0.019} (-0.2\sigma)$	$\chi_{lowTEB}^2$	$10496.4 (\nu: 1.4) (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0018} (-1.8\sigma)$	$Y_P$	$0.2415^{+0.0060}_{-0.0059} (-0.8\sigma)$	$\chi_{CamSpec}^2$	$12952.5 (\nu: 19.9)$
$c_{217}$	$0.9969^{+0.0035}_{-0.0035} (+0.6\sigma)$	$Age/Gyr$	$14.05^{+0.45}_{-0.45} (+0.6\sigma)$	$\chi_{prior}^2$	$9.0 (\nu: 6.1) (-1.9\sigma)$
$c_{TE}$	$1.0041^{+0.0089}_{-0.0088}$	$z_*$	$1089.53^{+0.73}_{-0.77} (-1.0\sigma)$	$\chi_{CMB}^2$	$23458.6 (\nu: 19.1) (+1570.0\sigma)$

$$\bar{\chi}_{eff}^2 = 23467.61; \Delta \bar{\chi}_{eff}^2 = 10487.76; R - 1 = 0.01554$$

### 11.19 base\_nnu\_CamSpecHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02229^{+0.00042}_{-0.00042} \quad (-0.0\sigma)$	$c_{EE}$	$0.9998^{+0.0094}_{-0.0092}$	$r_*$	$145.8^{+3.7}_{-3.6} \quad (+0.8\sigma)$
$\Omega_c h^2$	$0.1173^{+0.0061}_{-0.0059} \quad (-0.9\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.0413^{+0.0011}_{-0.0011} \quad (+0.7\sigma)$
$100\theta_{MC}$	$1.04105^{+0.00087}_{-0.00085} \quad (+0.6\sigma)$	$H_0$	$67.0^{+3.0}_{-2.9} \quad (-0.4\sigma)$	$z_{drag}$	$1059.5^{+1.5}_{-1.5} \quad (-0.4\sigma)$
$\tau$	$0.077^{+0.035}_{-0.035} \quad (-0.2\sigma)$	$\Omega_\Lambda$	$0.687^{+0.020}_{-0.021} \quad (+0.0\sigma)$	$r_{drag}$	$148.5^{+3.9}_{-3.7} \quad (+0.8\sigma)$
$N_{eff}$	$2.93^{+0.39}_{-0.38} \quad (-0.7\sigma)$	$\Omega_m$	$0.313^{+0.021}_{-0.020} \quad (-0.0\sigma)$	$k_D$	$0.1398^{+0.0027}_{-0.0027} \quad (-0.7\sigma)$
$\ln(10^{10} A_s)$	$3.080^{+0.072}_{-0.072} \quad (-0.5\sigma)$	$\Omega_m h^2$	$0.1402^{+0.0063}_{-0.0061} \quad (-0.9\sigma)$	$100\theta_D$	$0.16052^{+0.00094}_{-0.00091} \quad (-1.0\sigma)$
$n_s$	$0.964^{+0.017}_{-0.017} \quad (-0.2\sigma)$	$\Omega_m h^3$	$0.0939^{+0.0077}_{-0.0073} \quad (-0.7\sigma)$	$z_{eq}$	$3387^{+74}_{-73} \quad (-0.0\sigma)$
$y_{cal}$	$1.0002^{+0.0048}_{-0.0050} \quad (-0.1\sigma)$	$\sigma_8$	$0.820^{+0.033}_{-0.033} \quad (-0.7\sigma)$	$100\theta_{eq}$	$0.816^{+0.014}_{-0.014} \quad (+0.0\sigma)$
$A_{100}^{PS}$	$241^{+40}_{-50} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.019}_{-0.019} \quad (-0.7\sigma)$	$r_{drag}/D_V(0.57)$	$0.0715^{+0.0011}_{-0.0011} \quad (+0.1\sigma)$
$A_{143}^{PS}$	$37^{+20}_{-20} \quad (-0.9\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.613^{+0.022}_{-0.023} \quad (-0.8\sigma)$	$H(0.57)$	$92.3^{+2.9}_{-2.8} \quad (-0.6\sigma)$
$A_{217}^{PS}$	$100^{+30}_{-30} \quad (+0.2\sigma)$	$\sigma_8/h^{0.5}$	$1.002^{+0.033}_{-0.033} \quad (-0.6\sigma)$	$D_A(0.57)$	$1400^{+52}_{-51} \quad (+0.5\sigma)$
$A_{217}^{CIB}$	$44^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.483^{+0.077}_{-0.081} \quad (-0.6\sigma)$	$F_{AP}(0.57)$	$0.6764^{+0.0052}_{-0.0052} \quad (-0.0\sigma)$
$A_{143}^{tSZ}$	$< 6.92 \quad (-1.0\sigma)$	$z_{re}$	$9.7^{+3.0}_{-3.3} \quad (-0.3\sigma)$	$f\sigma_8(0.57)$	$0.477^{+0.018}_{-0.018} \quad (-0.8\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.22}$	$10^9 A_s$	$2.18^{+0.16}_{-0.15} \quad (-0.5\sigma)$	$\sigma_8(0.57)$	$0.610^{+0.027}_{-0.027} \quad (-0.6\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.864^{+0.035}_{-0.035} \quad (-1.1\sigma)$	$Y_P^{BBN}$	$0.2447^{+0.0053}_{-0.0054} \quad (-0.9\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1233^{+30}_{-30} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$27^{+6}_{-6} \quad (-0.7\sigma)$
$A_{100}^{dust}$	$0.98^{+0.37}_{-0.37}$	$D_{220}$	$5711^{+77}_{-77} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$105.3^{+4.2}_{-4.2} \quad (-0.3\sigma)$
$A_{143}^{dust}$	$1.02^{+0.35}_{-0.36}$	$D_{810}$	$2528^{+27}_{-27} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+5}_{-5} \quad (-0.9\sigma)$
$A_{217}^{dust}$	$1.22^{+0.22}_{-0.23}$	$D_{1420}$	$816^{+10}_{-9.6} \quad (+0.2\sigma)$	$\chi_{lowTEB}^2$	$10497.0 \quad (\nu: 2.4) \quad (-0.3\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.964^{+0.017}_{-0.017} \quad (-0.2\sigma)$	$\chi_{CamSpec}^2$	$12951.9 \quad (\nu: 20.8)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0018} \quad (-1.8\sigma)$	$Y_P$	$0.2434^{+0.0053}_{-0.0054} \quad (-0.9\sigma)$	$\chi_{H070p6}^2$	$1.4 \quad (\nu: 0.5) \quad (+0.4\sigma)$
$c_{217}$	$0.9969^{+0.0035}_{-0.0034} \quad (+0.7\sigma)$	$Age/Gyr$	$13.91^{+0.41}_{-0.40} \quad (+0.6\sigma)$	$\chi_{prior}^2$	$8.9 \quad (\nu: 6.1) \quad (-1.9\sigma)$
$c_{TE}$	$1.0038^{+0.0089}_{-0.0090}$	$z_*$	$1089.65^{+0.74}_{-0.75} \quad (-1.1\sigma)$	$\chi_{CMB}^2$	$23448.9 \quad (\nu: 18.9) \quad (+1563.3\sigma)$

$$\bar{\chi}_{eff}^2 = 23459.19; \Delta\bar{\chi}_{eff}^2 = 10489.62; R - 1 = 0.01028$$

## 11.20 base\_nnu\_CamSpecHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02219^{+0.00045}_{-0.00045} \quad (-0.0\sigma)$	$c_{EE}$	$0.9987^{+0.0095}_{-0.0092}$	$r_*$	$146.7^{+4.0}_{-4.0} \quad (+0.8\sigma)$
$\Omega_c h^2$	$0.1161^{+0.0064}_{-0.0061} \quad (-1.0\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.0415^{+0.0012}_{-0.0011} \quad (+0.8\sigma)$
$100\theta_{MC}$	$1.04119^{+0.00092}_{-0.00090} \quad (+0.7\sigma)$	$H_0$	$66.1^{+3.2}_{-3.1} \quad (-0.5\sigma)$	$z_{drag}$	$1059.1^{+1.7}_{-1.6} \quad (-0.4\sigma)$
$\tau$	$0.075^{+0.030}_{-0.031} \quad (-0.2\sigma)$	$\Omega_\Lambda$	$0.682^{+0.022}_{-0.023} \quad (-0.0\sigma)$	$r_{drag}$	$149.5^{+4.2}_{-4.1} \quad (+0.8\sigma)$
$N_{eff}$	$2.83^{+0.43}_{-0.41} \quad (-0.8\sigma)$	$\Omega_m$	$0.318^{+0.023}_{-0.022} \quad (+0.0\sigma)$	$k_D$	$0.1391^{+0.0030}_{-0.0029} \quad (-0.7\sigma)$
$\ln(10^{10} A_s)$	$3.073^{+0.068}_{-0.066} \quad (-0.5\sigma)$	$\Omega_m h^2$	$0.1390^{+0.0066}_{-0.0063} \quad (-0.9\sigma)$	$100\theta_D$	$0.16032^{+0.00097}_{-0.00095} \quad (-1.1\sigma)$
$n_s$	$0.960^{+0.019}_{-0.018} \quad (-0.2\sigma)$	$\Omega_m h^3$	$0.0920^{+0.0084}_{-0.0077} \quad (-0.7\sigma)$	$z_{eq}$	$3404^{+78}_{-79} \quad (+0.1\sigma)$
$y_{cal}$	$1.0002^{+0.0048}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8$	$0.816^{+0.034}_{-0.030} \quad (-0.7\sigma)$	$100\theta_{eq}$	$0.813^{+0.015}_{-0.015} \quad (-0.0\sigma)$
$A_{100}^{PS}$	$239^{+40}_{-50} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.018}_{-0.018} \quad (-0.7\sigma)$	$r_{drag}/D_V(0.57)$	$0.0713^{+0.0012}_{-0.0011} \quad (+0.0\sigma)$
$A_{143}^{PS}$	$36^{+20}_{-20} \quad (-0.9\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.612^{+0.022}_{-0.021} \quad (-0.8\sigma)$	$H(0.57)$	$91.5^{+3.2}_{-3.1} \quad (-0.6\sigma)$
$A_{217}^{PS}$	$100^{+30}_{-30} \quad (+0.2\sigma)$	$\sigma_8/h^{0.5}$	$1.003^{+0.032}_{-0.030} \quad (-0.6\sigma)$	$D_A(0.57)$	$1415^{+58}_{-57} \quad (+0.6\sigma)$
$A_{217}^{CIB}$	$44^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.491^{+0.075}_{-0.075} \quad (-0.5\sigma)$	$F_{AP}(0.57)$	$0.6776^{+0.0056}_{-0.0056} \quad (+0.0\sigma)$
$A_{143}^{tSZ}$	$< 7.03 \quad (-0.9\sigma)$	$z_{re}$	$< 12.0 \quad (-0.3\sigma)$	$f\sigma_8(0.57)$	$0.476^{+0.018}_{-0.016} \quad (-0.8\sigma)$
$r_{143 \times 217}^{PS}$	$0.53^{+0.24}_{-0.23}$	$10^9 A_s$	$2.16^{+0.15}_{-0.14} \quad (-0.5\sigma)$	$\sigma_8(0.57)$	$0.605^{+0.028}_{-0.026} \quad (-0.7\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.858^{+0.037}_{-0.037} \quad (-1.1\sigma)$	$Y_P^{BBN}$	$0.2432^{+0.0060}_{-0.0059} \quad (-0.9\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1238^{+31}_{-31} \quad (-0.4\sigma)$	$f_{2000}^{143}$	$27^{+6}_{-6} \quad (-0.8\sigma)$
$A_{100}^{dust}$	$0.98^{+0.37}_{-0.38}$	$D_{220}$	$5709^{+77}_{-76} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$104.8^{+4.2}_{-4.2} \quad (-0.4\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2527^{+27}_{-27} \quad (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+5}_{-5} \quad (-1.0\sigma)$
$A_{217}^{dust}$	$1.22^{+0.22}_{-0.23}$	$D_{1420}$	$816.0^{+9.8}_{-9.5} \quad (+0.2\sigma)$	$\chi_{lowTEB}^2$	$10497.5 \quad (\nu: 2.4) \quad (-0.3\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.960^{+0.019}_{-0.018} \quad (-0.2\sigma)$	$\chi_{CamSpec}^2$	$12951.0 \quad (\nu: 19.6)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.2419^{+0.0059}_{-0.0059} \quad (-0.9\sigma)$	$\chi_{prior}^2$	$8.9 \quad (\nu: 6.2) \quad (-1.9\sigma)$
$c_{217}$	$0.9969^{+0.0035}_{-0.0035} \quad (+0.6\sigma)$	$Age/Gyr$	$14.02^{+0.45}_{-0.44} \quad (+0.7\sigma)$	$\chi_{CMB}^2$	$23448.5 \quad (\nu: 18.3) \quad (+1571.0\sigma)$
$c_{TE}$	$1.0032^{+0.0090}_{-0.0090}$	$z_*$	$1089.57^{+0.74}_{-0.76} \quad (-1.2\sigma)$		

$$\bar{\chi}_{eff}^2 = 23457.44; \Delta \bar{\chi}_{eff}^2 = 10489.19; R - 1 = 0.00674$$

## 11.21 base\_nnu\_plikHM\_TE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02231	$0.02235^{+0.00070}_{-0.00066}$	$\sigma_8$	0.8017	$0.805^{+0.052}_{-0.047}$	$100\theta_*$	1.04160	$1.0414^{+0.0025}_{-0.0024}$
$\Omega_c h^2$	0.1156	$0.117^{+0.014}_{-0.013}$	$\sigma_8 \Omega_m^{0.5}$	0.4437	$0.444^{+0.029}_{-0.029}$	$D_A/\text{Gpc}$	14.06	$13.99^{+0.76}_{-0.79}$
$100\theta_{\text{MC}}$	1.04130	$1.0412^{+0.0019}_{-0.0018}$	$\sigma_8 \Omega_m^{0.25}$	0.5964	$0.598^{+0.035}_{-0.034}$	$z_{\text{drag}}$	1059.36	$1059.6^{+3.0}_{-2.8}$
$\tau$	0.0603	$0.060^{+0.041}_{-0.044}$	$\sigma_8/h^{0.5}$	0.978	$0.978^{+0.050}_{-0.050}$	$r_{\text{drag}}$	149.1	$148.4^{+8.6}_{-8.8}$
$N_{\text{eff}}$	2.90	$2.99^{+0.94}_{-0.89}$	$\langle d^2 \rangle^{1/2}$	2.412	$2.41^{+0.11}_{-0.12}$	$k_D$	0.1393	$0.1398^{+0.0063}_{-0.0057}$
$\ln(10^{10} A_s)$	3.041	$3.043^{+0.094}_{-0.090}$	$z_{\text{re}}$	8.20	$8.1^{+3.9}_{-4.5}$	$100\theta_D$	0.16046	$0.1607^{+0.0023}_{-0.0021}$
$n_s$	0.9705	$0.973^{+0.030}_{-0.029}$	$10^9 A_s$	2.093	$2.10^{+0.20}_{-0.20}$	$z_{\text{eq}}$	3363	$3356^{+130}_{-120}$
$y_{\text{cal}}$	0.99998	$1.0002^{+0.0050}_{-0.0048}$	$10^9 A_s e^{-2\tau}$	1.855	$1.859^{+0.056}_{-0.057}$	$k_{\text{eq}}$	0.010160	$0.01019^{+0.00046}_{-0.00042}$
$A_{100}^{\text{dustTE}}$	0.137	$0.136^{+0.075}_{-0.074}$	$D_{40}$	1207	$1205^{+51}_{-51}$	$100\theta_{\text{eq}}$	0.8204	$0.822^{+0.024}_{-0.024}$
$A_{100 \times 143}^{\text{dustTE}}$	0.133	$0.133^{+0.057}_{-0.057}$	$D_{220}$	5683	$5679^{+110}_{-110}$	$100\theta_{s,\text{eq}}$	0.4532	$0.454^{+0.012}_{-0.012}$
$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.17}_{-0.17}$	$D_{810}$	2529	$2528^{+54}_{-54}$	$r_{\text{drag}}/D_V(0.57)$	0.07190	$0.0720^{+0.0018}_{-0.0017}$
$A_{143}^{\text{dustTE}}$	0.151	$0.15^{+0.11}_{-0.11}$	$D_{1420}$	819.3	$818^{+31}_{-31}$	$H(0.57)$	92.2	$92.8^{+6.7}_{-6.4}$
$A_{143 \times 217}^{\text{dustTE}}$	0.332	$0.33^{+0.16}_{-0.16}$	$D_{2000}$	232.6	$232^{+14}_{-14}$	$D_A(0.57)$	1397	$1389^{+110}_{-110}$
$A_{217}^{\text{dustTE}}$	1.649	$1.65^{+0.50}_{-0.49}$	$n_{s,0.002}$	0.9705	$0.973^{+0.030}_{-0.029}$	$F_{\text{AP}}(0.57)$	0.6747	$0.6743^{+0.0087}_{-0.0083}$
$c_{100}$	0.99927	$0.9992^{+0.0019}_{-0.0020}$	$Y_P$	0.2433	$0.244^{+0.013}_{-0.012}$	$f\sigma_8(0.57)$	0.4648	$0.466^{+0.027}_{-0.026}$
$H_0$	67.2	$67.8^{+6.4}_{-5.7}$	$Y_P^{\text{BBN}}$	0.2446	$0.246^{+0.013}_{-0.012}$	$\sigma_8(0.57)$	0.5976	$0.600^{+0.042}_{-0.041}$
$\Omega_\Lambda$	0.6936	$0.695^{+0.034}_{-0.034}$	$10^5 \text{D}/\text{H}$	2.550	$2.57^{+0.25}_{-0.22}$	$\chi_{\text{lowTEB}}^2$	10493.65	$10494.7 (\nu: 2.5)$
$\Omega_m$	0.3064	$0.305^{+0.034}_{-0.034}$	$\text{Age}/\text{Gyr}$	13.93	$13.86^{+0.88}_{-0.90}$	$\chi_{\text{plikTE}}^2$	931.5	$939.4 (\nu: 10.5)$
$\Omega_m h^2$	0.1385	$0.140^{+0.014}_{-0.014}$	$z_*$	1089.45	$1089.6^{+1.7}_{-1.5}$	$\chi_{\text{prior}}^2$	1.9	$7.8 (\nu: 6.5)$
$\Omega_m h^3$	0.0932	$0.095^{+0.018}_{-0.017}$	$r_*$	146.4	$145.7^{+8.3}_{-8.5}$	$\chi_{\text{CMB}}^2$	11425.1	$11434.2 (\nu: 9.8)$

Best-fit  $\chi_{\text{eff}}^2 = 11427.06$ ;  $\bar{\chi}_{\text{eff}}^2 = 11441.99$ ;  $R - 1 = 0.00488$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10493.65 plik\_dx11dr2\_HM\_v18\_TE: 931.46

## 11.22 base\_nnu\_plikHM\_EE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02383	$0.0244^{+0.0043}_{-0.0046}$	$\sigma_8 \Omega_m^{0.5}$	0.412	$0.414^{+0.066}_{-0.064}$	$D_A/\text{Gpc}$	14.15	$13.8^{+2.6}_{-2.4}$
$\Omega_c h^2$	0.1093	$0.117^{+0.042}_{-0.041}$	$\sigma_8 \Omega_m^{0.25}$	0.568	$0.576^{+0.071}_{-0.072}$	$z_{\text{drag}}$	1062.3	$1064^{+14}_{-15}$
$100\theta_{\text{MC}}$	1.0406	$1.0401^{+0.0069}_{-0.0059}$	$\sigma_8/h^{0.5}$	0.940	$0.941^{+0.091}_{-0.086}$	$r_{\text{drag}}$	149.5	$146^{+30}_{-30}$
$\tau$	0.0652	$0.068^{+0.045}_{-0.043}$	$\langle d^2 \rangle^{1/2}$	2.355	$2.35^{+0.18}_{-0.17}$	$k_D$	0.1402	$0.144^{+0.022}_{-0.023}$
$N_{\text{eff}}$	2.83	$3.3^{+2.8}_{-2.9}$	$z_{\text{re}}$	8.19	$8.4^{+3.9}_{-4.3}$	$100\theta_D$	0.15839	$0.1592^{+0.0045}_{-0.0043}$
$\ln(10^{10} A_s)$	3.064	$3.08^{+0.15}_{-0.16}$	$10^9 A_s$	2.141	$2.17^{+0.32}_{-0.34}$	$z_{\text{eq}}$	3276	$3261^{+270}_{-250}$
$n_s$	0.982	$0.991^{+0.067}_{-0.068}$	$10^9 A_s e^{-2\tau}$	1.879	$1.89^{+0.17}_{-0.20}$	$k_{\text{eq}}$	0.00985	$0.0101^{+0.0014}_{-0.0014}$
$y_{\text{cal}}$	1.00000	$1.0000^{+0.0049}_{-0.0050}$	$D_{40}$	1222	$1218^{+60}_{-58}$	$100\theta_{\text{eq}}$	0.840	$0.846^{+0.058}_{-0.060}$
$A_{100}^{\text{dustEE}}$	0.0827	$0.083^{+0.012}_{-0.011}$	$D_{220}$	5963	$5991^{+490}_{-520}$	$100\theta_{s,\text{eq}}$	0.4623	$0.465^{+0.026}_{-0.028}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0501	$0.050^{+0.010}_{-0.010}$	$D_{810}$	2593	$2588^{+80}_{-84}$	$r_{\text{drag}}/D_V(0.57)$	0.07356	$0.0741^{+0.0050}_{-0.0048}$
$A_{100 \times 217}^{\text{dustEE}}$	0.098	$0.099^{+0.064}_{-0.064}$	$D_{1420}$	850	$842^{+57}_{-57}$	$H(0.57)$	93.3	$97^{+20}_{-20}$
$A_{143}^{\text{dustEE}}$	0.1010	$0.101^{+0.014}_{-0.014}$	$D_{2000}$	244.3	$240^{+30}_{-30}$	$D_A(0.57)$	1364	$1328^{+400}_{-300}$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.223^{+0.091}_{-0.092}$	$n_{s,0.002}$	0.982	$0.991^{+0.067}_{-0.068}$	$F_{\text{AP}}(0.57)$	0.6665	$0.665^{+0.024}_{-0.023}$
$A_{217}^{\text{dustEE}}$	0.641	$0.65^{+0.25}_{-0.25}$	$Y_P$	0.2430	$0.248^{+0.037}_{-0.039}$	$f\sigma_8(0.57)$	0.447	$0.452^{+0.056}_{-0.057}$
$H_0$	69.8	$73^{+20}_{-20}$	$Y_P^{\text{BBN}}$	0.2443	$0.249^{+0.037}_{-0.039}$	$\sigma_8(0.57)$	0.593	$0.61^{+0.10}_{-0.10}$
$\Omega_\Lambda$	0.725	$0.730^{+0.083}_{-0.093}$	$10^5 D/H$	2.27	$2.34^{+0.51}_{-0.50}$	$\chi_{\text{lowTEB}}^2$	10493.70	$10494.9 (\nu: 3.3)$
$\Omega_m$	0.275	$0.270^{+0.093}_{-0.083}$	Age/Gyr	13.84	$13.5^{+3.0}_{-2.8}$	$\chi_{\text{plikEE}}^2$	750.9	$759.4 (\nu: 12.0)$
$\Omega_m h^2$	0.1337	$0.142^{+0.045}_{-0.044}$	$z_*$	1087.09	$1087.5^{+4.0}_{-3.9}$	$\chi_{\text{prior}}^2$	4.1	$8.4 (\nu: 6.4)$
$\Omega_m h^3$	0.093	$0.106^{+0.064}_{-0.059}$	$r_*$	147.3	$144^{+30}_{-30}$	$\chi_{\text{CMB}}^2$	11244.6	$11254.3 (\nu: 11.4)$
$\sigma_8$	0.785	$0.80^{+0.11}_{-0.12}$	$100\theta_*$	1.0408	$1.0400^{+0.0089}_{-0.0078}$			

Best-fit  $\chi_{\text{eff}}^2 = 11248.77$ ;  $\bar{\chi}_{\text{eff}}^2 = 11262.63$ ;  $R - 1 = 0.01533$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.69 plik\_dx11dr2\_HM\_v18\_EE: 750.93

### 11.23 base\_nnu\_CamSpecHM\_TE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02242	$0.02246^{+0.00070}_{-0.00069}$ (+0.3 $\sigma$ )	$\sigma_8/h^{0.5}$	0.968	$0.969^{+0.052}_{-0.051}$ (-0.4 $\sigma$ )	$k_D$	0.1401	$0.1406^{+0.0061}_{-0.0058}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	0.1166	$0.118^{+0.014}_{-0.013}$ (+0.1 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.371	$2.37^{+0.12}_{-0.12}$ (-0.7 $\sigma$ )	$100\theta_D$	0.16093	$0.1611^{+0.0022}_{-0.0021}$ (+0.4 $\sigma$ )
$100\theta_{MC}$	1.04127	$1.0412^{+0.0018}_{-0.0017}$ (-0.0 $\sigma$ )	$z_{re}$	8.55	$8.6^{+4.1}_{-4.5}$ (+0.2 $\sigma$ )	$z_{eq}$	3311	$3304^{+130}_{-130}$ (-0.8 $\sigma$ )
$\tau$	0.0637	$0.066^{+0.044}_{-0.043}$ (+0.2 $\sigma$ )	$10^9 A_s$	2.097	$2.11^{+0.21}_{-0.21}$ (+0.1 $\sigma$ )	$100\theta_{eq}$	0.8303	$0.832^{+0.026}_{-0.025}$ (+0.8 $\sigma$ )
$N_{eff}$	3.07	$3.16^{+0.94}_{-0.93}$ (+0.4 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.846	$1.849^{+0.069}_{-0.069}$ (-0.3 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07265	$0.0728^{+0.0019}_{-0.0018}$ (+0.9 $\sigma$ )
$\ln(10^{10} A_s)$	3.043	$3.048^{+0.097}_{-0.096}$ (+0.1 $\sigma$ )	$D_{40}$	1178	$1177^{+52}_{-51}$ (-1.1 $\sigma$ )	$H(0.57)$	93.7	$94.3^{+6.8}_{-6.3}$ (+0.5 $\sigma$ )
$n_s$	0.9821	$0.985^{+0.031}_{-0.030}$ (+0.8 $\sigma$ )	$D_{220}$	5623	$5622^{+150}_{-150}$ (-1.0 $\sigma$ )	$D_A(0.57)$	1369	$1361^{+110}_{-110}$ (-0.5 $\sigma$ )
$y_{cal}$	1.00005	$0.99999^{+0.0048}_{-0.0048}$ (-0.1 $\sigma$ )	$D_{810}$	2512	$2511^{+73}_{-72}$ (-0.6 $\sigma$ )	$F_{AP}(0.57)$	0.6713	$0.6708^{+0.0086}_{-0.0085}$ (-0.8 $\sigma$ )
$c_{TE}$	0.9983	$0.999^{+0.019}_{-0.019}$	$D_{1420}$	813.4	$812^{+34}_{-34}$ (-0.4 $\sigma$ )	$f\sigma_8(0.57)$	0.4626	$0.464^{+0.028}_{-0.027}$ (-0.1 $\sigma$ )
$H_0$	69.0	$69.6^{+6.6}_{-6.1}$ (+0.6 $\sigma$ )	$n_{s,0.002}$	0.9821	$0.985^{+0.031}_{-0.030}$ (+0.8 $\sigma$ )	$\sigma_8(0.57)$	0.6025	$0.606^{+0.044}_{-0.041}$ (+0.3 $\sigma$ )
$\Omega_\Lambda$	0.7067	$0.708^{+0.032}_{-0.034}$ (+0.8 $\sigma$ )	$Y_P$	0.2453	$0.246^{+0.012}_{-0.012}$ (+0.3 $\sigma$ )	$Y_P^{BBN}$	0.2466	$0.248^{+0.012}_{-0.012}$ (+0.3 $\sigma$ )
$\Omega_m$	0.2933	$0.292^{+0.034}_{-0.032}$ (-0.8 $\sigma$ )	Age/Gyr	13.74	$13.67^{+0.90}_{-0.88}$ (-0.4 $\sigma$ )	$\chi^2_{lowTEB}$	10492.09	$10493.4 (\nu: 1.5)$ (-0.6 $\sigma$ )
$\Omega_m h^2$	0.1397	$0.141^{+0.014}_{-0.013}$ (+0.1 $\sigma$ )	$z_*$	1089.57	$1089.7^{+1.6}_{-1.5}$ (+0.1 $\sigma$ )	$\chi^2_{CamSpec}$	2694.7	$2700.6 (\nu: 6.3)$
$\Omega_m h^3$	0.0964	$0.098^{+0.018}_{-0.018}$ (+0.4 $\sigma$ )	$r_*$	145.2	$144.6^{+8.4}_{-8.1}$ (-0.3 $\sigma$ )	$\chi^2_{prior}$	10.06	$12.0 (\nu: 1.9)$ (+1.1 $\sigma$ )
$\sigma_8$	0.804	$0.808^{+0.053}_{-0.050}$ (+0.1 $\sigma$ )	$100\theta_*$	1.04145	$1.0413^{+0.0024}_{-0.0022}$ (-0.1 $\sigma$ )	$\chi^2_{CMB}$	13186.8	$13193.9 (\nu: 7.3)$ (+397.4 $\sigma$ )
$\sigma_8 \Omega_m^{0.5}$	0.4353	$0.436^{+0.030}_{-0.030}$ (-0.5 $\sigma$ )	$z_{drag}$	1059.82	$1060.0^{+3.0}_{-2.9}$ (+0.3 $\sigma$ )			
$\sigma_8 \Omega_m^{0.25}$	0.5916	$0.593^{+0.036}_{-0.035}$ (-0.3 $\sigma$ )	$r_{drag}$	147.8	$147.2^{+8.7}_{-8.4}$ (-0.3 $\sigma$ )			

Best-fit  $\chi^2_{eff} = 13196.85$ ;  $\Delta\chi^2_{eff} = 1769.79$ ;  $\bar{\chi}^2_{eff} = 13205.90$ ;  $\Delta\bar{\chi}^2_{eff} = 1763.91$ ;  $R - 1 = 0.00676$

$\chi^2_{eff}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10492.09 ( $\Delta$  -1.57) CamSpec like\_v9.10CMH\_unified: 2694.71



## 11.24 base\_nnu\_CamSpecHM\_EE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02478	$0.0251^{+0.0040}_{-0.0041}$ (+0.3 $\sigma$ )	$\sigma_8/h^{0.5}$	0.945	$0.943^{+0.078}_{-0.073}$ (+0.1 $\sigma$ )	$k_D$	0.1462	$0.148^{+0.019}_{-0.019}$ (+0.4 $\sigma$ )
$\Omega_c h^2$	0.1207	$0.126^{+0.036}_{-0.034}$ (+0.4 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.370	$2.36^{+0.17}_{-0.15}$ (+0.1 $\sigma$ )	$100\theta_D$	0.15906	$0.1596^{+0.0037}_{-0.0036}$ (+0.2 $\sigma$ )
$100\theta_{MC}$	1.03902	$1.0388^{+0.0049}_{-0.0044}$ (-0.4 $\sigma$ )	$z_{re}$	8.16	$8.1^{+3.9}_{-4.4}$ (-0.1 $\sigma$ )	$z_{eq}$	3282	$3271^{+230}_{-230}$ (+0.1 $\sigma$ )
$\tau$	0.0641	$0.065^{+0.044}_{-0.043}$ (-0.1 $\sigma$ )	$10^9 A_s$	2.183	$2.20^{+0.28}_{-0.29}$ (+0.1 $\sigma$ )	$100\theta_{eq}$	0.841	$0.845^{+0.054}_{-0.054}$ (-0.0 $\sigma$ )
$N_{eff}$	3.49	$3.8^{+2.5}_{-2.4}$ (+0.3 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.920	$1.93^{+0.15}_{-0.16}$ (+0.3 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07368	$0.0741^{+0.0045}_{-0.0045}$ (-0.0 $\sigma$ )
$\ln(10^{10} A_s)$	3.083	$3.09^{+0.13}_{-0.14}$ (+0.2 $\sigma$ )	$D_{40}$	1237	$1232^{+55}_{-54}$ (+0.5 $\sigma$ )	$H(0.57)$	98.1	$101^{+20}_{-20}$ (+0.3 $\sigma$ )
$n_s$	0.987	$0.993^{+0.059}_{-0.060}$ (+0.1 $\sigma$ )	$D_{220}$	6040	$6051^{+440}_{-470}$ (+0.2 $\sigma$ )	$D_A(0.57)$	1294	$1272^{+300}_{-300}$ (-0.3 $\sigma$ )
$y_{cal}$	1.00012	$1.0001^{+0.0049}_{-0.0049}$ (+0.0 $\sigma$ )	$D_{810}$	2576	$2571^{+83}_{-82}$ (-0.4 $\sigma$ )	$F_{AP}(0.57)$	0.6649	$0.664^{+0.021}_{-0.020}$ (-0.1 $\sigma$ )
$c_{EE}$	0.9979	$0.998^{+0.020}_{-0.020}$	$D_{1420}$	832.1	$827^{+47}_{-44}$ (-0.5 $\sigma$ )	$f\sigma_8(0.57)$	0.4594	$0.462^{+0.047}_{-0.047}$ (+0.3 $\sigma$ )
$H_0$	73.7	$76^{+20}_{-20}$ (+0.3 $\sigma$ )	$n_{s,0.002}$	0.987	$0.993^{+0.059}_{-0.060}$ (+0.1 $\sigma$ )	$\sigma_8(0.57)$	0.614	$0.623^{+0.085}_{-0.088}$ (+0.3 $\sigma$ )
$\Omega_\Lambda$	0.731	$0.734^{+0.074}_{-0.080}$ (+0.1 $\sigma$ )	$Y_P$	0.2517	$0.255^{+0.031}_{-0.032}$ (+0.4 $\sigma$ )	$Y_P^{BBN}$	0.2530	$0.256^{+0.031}_{-0.032}$ (+0.4 $\sigma$ )
$\Omega_m$	0.269	$0.266^{+0.080}_{-0.074}$ (-0.1 $\sigma$ )	Age/Gyr	13.18	$13.0^{+2.4}_{-2.2}$ (-0.4 $\sigma$ )	$\chi^2_{lowTEB}$	10494.28	$10495.3$ ( $\nu$ : 3.4) (+0.2 $\sigma$ )
$\Omega_m h^2$	0.1462	$0.152^{+0.038}_{-0.037}$ (+0.4 $\sigma$ )	$z_*$	1087.60	$1087.9^{+3.2}_{-3.0}$ (+0.2 $\sigma$ )	$\chi^2_{CamSpec}$	2187.0	$2193.0$ ( $\nu$ : 8.2)
$\Omega_m h^3$	0.108	$0.117^{+0.058}_{-0.054}$ (+0.4 $\sigma$ )	$r_*$	140.3	$138^{+20}_{-20}$ (-0.4 $\sigma$ )	$\chi^2_{prior}$	10.08	$12.1$ ( $\nu$ : 2.1) (+1.1 $\sigma$ )
$\sigma_8$	0.811	$0.821^{+0.096}_{-0.099}$ (+0.3 $\sigma$ )	$100\theta_*$	1.0387	$1.0383^{+0.0066}_{-0.0059}$ (-0.4 $\sigma$ )	$\chi^2_{CMB}$	12681.3	$12688.3$ ( $\nu$ : 6.9) (+300.3 $\sigma$ )
$\sigma_8 \Omega_m^{0.5}$	0.421	$0.421^{+0.056}_{-0.051}$ (+0.2 $\sigma$ )	$z_{drag}$	1065.7	$1067^{+12}_{-12}$ (+0.4 $\sigma$ )			
$\sigma_8 \Omega_m^{0.25}$	0.584	$0.588^{+0.060}_{-0.059}$ (+0.3 $\sigma$ )	$r_{drag}$	142.2	$140^{+20}_{-20}$ (-0.4 $\sigma$ )			

Best-fit  $\chi^2_{eff} = 12691.38$ ;  $\Delta\chi^2_{eff} = 1442.61$ ;  $\bar{\chi}^2_{eff} = 12700.44$ ;  $\Delta\bar{\chi}^2_{eff} = 1437.81$ ;  $R - 1 = 0.00829$

$\chi^2_{eff}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.28 ( $\Delta$  0.59) CamSpec like\_v9.10CMH\_unified: 2187.02

## 11.25 base\_nnu\_plikHM\_TE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02194	$0.02199^{+0.00080}_{-0.00078}$	$\sigma_8$	0.7865	$0.787^{+0.049}_{-0.045}$	$100\theta_*$	1.04238	$1.0423^{+0.0027}_{-0.0026}$
$\Omega_c h^2$	0.1121	$0.113^{+0.014}_{-0.013}$	$\sigma_8 \Omega_m^{0.5}$	0.4483	$0.448^{+0.030}_{-0.029}$	$D_A/\text{Gpc}$	14.34	$14.30^{+0.82}_{-0.86}$
$100\theta_{\text{MC}}$	1.04183	$1.0418^{+0.0021}_{-0.0020}$	$\sigma_8 \Omega_m^{0.25}$	0.5938	$0.594^{+0.033}_{-0.031}$	$z_{\text{drag}}$	1057.95	$1058.2^{+3.5}_{-3.2}$
$\tau$	0.0537	$0.052^{+0.033}_{-0.040}$	$\sigma_8/h^{0.5}$	0.9803	$0.979^{+0.048}_{-0.046}$	$r_{\text{drag}}$	152.4	$151.9^{+9.2}_{-9.7}$
$N_{\text{eff}}$	2.56	$2.63^{+0.96}_{-0.93}$	$\langle d^2 \rangle^{1/2}$	2.456	$2.45^{+0.13}_{-0.12}$	$k_D$	0.1371	$0.1375^{+0.0065}_{-0.0064}$
$\ln(10^{10} A_s)$	3.018	$3.016^{+0.086}_{-0.087}$	$z_{\text{re}}$	7.53	$7.2^{+3.6}_{-4.2}$	$100\theta_D$	0.15985	$0.1600^{+0.0023}_{-0.0023}$
$n_s$	0.9483	$0.951^{+0.037}_{-0.036}$	$10^9 A_s$	2.045	$2.04^{+0.18}_{-0.18}$	$z_{\text{eq}}$	3426	$3422^{+150}_{-140}$
$y_{\text{cal}}$	0.99954	$0.99999^{+0.0048}_{-0.0049}$	$10^9 A_s e^{-2\tau}$	1.837	$1.841^{+0.063}_{-0.066}$	$k_{\text{eq}}$	0.010110	$0.01014^{+0.00045}_{-0.00041}$
$A_{100}^{\text{dustTE}}$	0.145	$0.137^{+0.073}_{-0.074}$	$D_{40}$	1246	$1244^{+67}_{-64}$	$100\theta_{\text{eq}}$	0.8081	$0.809^{+0.027}_{-0.026}$
$A_{100 \times 143}^{\text{dustTE}}$	0.136	$0.133^{+0.057}_{-0.058}$	$D_{220}$	5713	$5715^{+120}_{-120}$	$100\theta_{s,\text{eq}}$	0.4470	$0.448^{+0.014}_{-0.013}$
$A_{100 \times 217}^{\text{dustTE}}$	0.315	$0.30^{+0.17}_{-0.17}$	$D_{810}$	2523	$2526^{+54}_{-55}$	$r_{\text{drag}}/D_V(0.57)$	0.07098	$0.0711^{+0.0020}_{-0.0019}$
$A_{143}^{\text{dustTE}}$	0.156	$0.15^{+0.11}_{-0.10}$	$D_{1420}$	816.9	$817^{+30}_{-31}$	$H(0.57)$	89.5	$90.0^{+7.0}_{-6.8}$
$A_{143 \times 217}^{\text{dustTE}}$	0.344	$0.34^{+0.16}_{-0.16}$	$D_{2000}$	232.6	$233^{+13}_{-14}$	$D_A(0.57)$	1450	$1444^{+130}_{-130}$
$A_{217}^{\text{dustTE}}$	1.70	$1.65^{+0.50}_{-0.50}$	$n_{s,0.002}$	0.9483	$0.951^{+0.037}_{-0.036}$	$F_{\text{AP}}(0.57)$	0.6794	$0.679^{+0.010}_{-0.0098}$
$c_{100}$	0.99908	$0.9992^{+0.0020}_{-0.0020}$	$Y_P$	0.2383	$0.239^{+0.014}_{-0.013}$	$f\sigma_8(0.57)$	0.4605	$0.460^{+0.026}_{-0.024}$
$H_0$	64.4	$64.8^{+6.8}_{-6.7}$	$Y_P^{\text{BBN}}$	0.2396	$0.240^{+0.014}_{-0.013}$	$\sigma_8(0.57)$	0.5820	$0.583^{+0.041}_{-0.040}$
$\Omega_\Lambda$	0.6750	$0.676^{+0.038}_{-0.042}$	$10^5 D/H$	2.500	$2.51^{+0.25}_{-0.24}$	$\chi^2_{\text{lowEB}}$	5430.74	$5431.7 (\nu: 0.7)$
$\Omega_m$	0.3250	$0.324^{+0.042}_{-0.038}$	Age/Gyr	14.31	$14.26^{+0.99}_{-1.0}$	$\chi^2_{\text{plikTE}}$	930.2	$938.1 (\nu: 9.1)$
$\Omega_m h^2$	0.1346	$0.136^{+0.014}_{-0.014}$	$z_*$	1089.26	$1089.3^{+1.7}_{-1.5}$	$\chi^2_{\text{prior}}$	1.7	$7.8 (\nu: 6.6)$
$\Omega_m h^3$	0.0867	$0.088^{+0.018}_{-0.017}$	$r_*$	149.5	$149.0^{+8.9}_{-9.3}$	$\chi^2_{\text{CMB}}$	6360.9	$6369.8 (\nu: 9.7)$

Best-fit  $\chi^2_{\text{eff}} = 6362.64$ ;  $\bar{\chi}^2_{\text{eff}} = 6377.60$ ;  $R - 1 = 0.00720$

$\chi^2_{\text{eff}}$ : CMB - lowl\_QU\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 5430.74 plik\_dx11dr2\_HM\_v18\_TE: 930.16

## 11.26 base\_nnu\_plikHM\_EE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.01826	$0.0212^{+0.0051}_{-0.0045}$	$\sigma_8 \Omega_m^{0.5}$	0.453	$0.438^{+0.075}_{-0.074}$	$D_A/\text{Gpc}$	17.67	$15.7^{+2.3}_{-2.8}$
$\Omega_c h^2$	0.0748	$0.095^{+0.036}_{-0.028}$	$\sigma_8 \Omega_m^{0.25}$	0.558	$0.569^{+0.065}_{-0.063}$	$z_{\text{drag}}$	1042.9	$1053^{+16}_{-15}$
$100\theta_{\text{MC}}$	1.0508	$1.0447^{+0.0071}_{-0.0076}$	$\sigma_8/h^{0.5}$	1.008	$0.98^{+0.10}_{-0.10}$	$r_{\text{drag}}$	191.3	$168^{+30}_{-30}$
$\tau$	0.0496	$0.055^{+0.036}_{-0.040}$	$\langle d^2 \rangle^{1/2}$	2.594	$2.49^{+0.22}_{-0.25}$	$k_D$	0.1138	$0.128^{+0.023}_{-0.018}$
$N_{\text{eff}}$	0.05	$< 4.01$	$z_{\text{re}}$	6.89	$7.2^{+3.5}_{-3.9}$	$100\theta_D$	0.15627	$0.1574^{+0.0041}_{-0.0038}$
$\ln(10^{10} A_s)$	2.856	$2.97^{+0.17}_{-0.15}$	$10^9 A_s$	1.738	$1.96^{+0.34}_{-0.30}$	$z_{\text{eq}}$	3718	$3509^{+340}_{-370}$
$n_s$	0.868	$0.923^{+0.090}_{-0.075}$	$10^9 A_s e^{-2\tau}$	1.574	$1.75^{+0.23}_{-0.21}$	$k_{\text{eq}}$	0.00878	$0.0095^{+0.0013}_{-0.0011}$
$y_{\text{cal}}$	1.00008	$1.0000^{+0.0047}_{-0.0049}$	$D_{40}$	1287	$1276^{+79}_{-84}$	$100\theta_{\text{eq}}$	0.756	$0.795^{+0.076}_{-0.066}$
$A_{100}^{\text{dustEE}}$	0.0776	$0.079^{+0.012}_{-0.012}$	$D_{220}$	5477	$5778^{+560}_{-550}$	$100\theta_{s,\text{eq}}$	0.4220	$0.440^{+0.036}_{-0.031}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0443	$0.046^{+0.011}_{-0.011}$	$D_{810}$	2564	$2578^{+81}_{-83}$	$r_{\text{drag}}/D_V(0.57)$	0.0677	$0.0703^{+0.0059}_{-0.0051}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.099^{+0.063}_{-0.064}$	$D_{1420}$	869.9	$855^{+47}_{-52}$	$H(0.57)$	69.6	$82^{+20}_{-20}$
$A_{143}^{\text{dustEE}}$	0.0953	$0.097^{+0.015}_{-0.015}$	$D_{2000}$	260.7	$250^{+24}_{-26}$	$D_A(0.57)$	1932	$1625^{+400}_{-400}$
$A_{143 \times 217}^{\text{dustEE}}$	0.222	$0.224^{+0.090}_{-0.091}$	$n_{s,0.002}$	0.868	$0.923^{+0.090}_{-0.075}$	$F_{\text{AP}}(0.57)$	0.7045	$0.686^{+0.031}_{-0.034}$
$A_{217}^{\text{dustEE}}$	0.643	$0.65^{+0.26}_{-0.26}$	$Y_P$	0.1937	$0.220^{+0.041}_{-0.032}$	$f\sigma_8(0.57)$	0.4179	$0.437^{+0.049}_{-0.048}$
$H_0$	46.5	$58^{+20}_{-20}$	$Y_P^{\text{BBN}}$	0.1948	$0.221^{+0.042}_{-0.032}$	$\sigma_8(0.57)$	0.490	$0.543^{+0.098}_{-0.076}$
$\Omega_\Lambda$	0.566	$0.64^{+0.13}_{-0.13}$	$10^5 D/H$	2.174	$2.25^{+0.45}_{-0.44}$	$\chi_{\text{lowEB}}^2$	5430.73	$5431.7 (\nu: 1.0)$
$\Omega_m$	0.434	$0.36^{+0.13}_{-0.13}$	Age/Gyr	18.24	$15.8^{+2.9}_{-3.4}$	$\chi_{\text{plikEE}}^2$	746.5	$756.1 (\nu: 11.1)$
$\Omega_m h^2$	0.0937	$0.117^{+0.040}_{-0.030}$	$z_*$	1087.28	$1087.4^{+3.8}_{-3.5}$	$\chi_{\text{prior}}^2$	2.9	$7.4 (\nu: 5.7)$
$\Omega_m h^3$	0.0435	$0.070^{+0.052}_{-0.036}$	$r_*$	186.2	$164^{+30}_{-30}$	$\chi_{\text{CMB}}^2$	6177.2	$6187.8 (\nu: 11.9)$
$\sigma_8$	0.687	$0.740^{+0.11}_{-0.089}$	$100\theta_*$	1.0539	$1.0462^{+0.0090}_{-0.0098}$			

Best-fit  $\chi_{\text{eff}}^2 = 6180.11$ ;  $\bar{\chi}_{\text{eff}}^2 = 6195.27$ ;  $R - 1 = 0.01852$

$\chi_{\text{eff}}^2$ : CMB - lowl\_QU\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 5430.73 plik\_dx11dr2\_HM\_v18\_EE: 746.48

## 11.27 base\_nnu\_CamSpecHM\_TE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02219	$0.02226^{+0.00078}_{-0.00078}$ (+0.7 $\sigma$ )	$\sigma_8/h^{0.5}$	0.9638	$0.963^{+0.050}_{-0.049}$ (−0.6 $\sigma$ )	$k_D$	0.1386	$0.1393^{+0.0065}_{-0.0062}$ (+0.6 $\sigma$ )
$\Omega_c h^2$	0.1141	$0.116^{+0.014}_{-0.014}$ (+0.4 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.384	$2.38^{+0.13}_{-0.13}$ (−1.1 $\sigma$ )	$100\theta_D$	0.16051	$0.1608^{+0.0023}_{-0.0022}$ (+0.7 $\sigma$ )
$100\theta_{MC}$	1.04158	$1.0415^{+0.0020}_{-0.0018}$ (−0.3 $\sigma$ )	$z_{re}$	7.61	$7.5^{+3.7}_{-4.4}$ (+0.1 $\sigma$ )	$z_{eq}$	3347	$3337^{+140}_{-140}$ (−1.2 $\sigma$ )
$\tau$	0.0544	$0.054^{+0.035}_{-0.043}$ (+0.1 $\sigma$ )	$10^9 A_s$	2.049	$2.06^{+0.19}_{-0.19}$ (+0.1 $\sigma$ )	$100\theta_{eq}$	0.8232	$0.825^{+0.028}_{-0.027}$ (+1.2 $\sigma$ )
$N_{eff}$	2.85	$2.97^{+0.98}_{-0.99}$ (+0.7 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.838	$1.843^{+0.071}_{-0.072}$ (+0.1 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07211	$0.0723^{+0.0021}_{-0.0020}$ (+1.2 $\sigma$ )
$\ln(10^{10} A_s)$	3.020	$3.022^{+0.091}_{-0.088}$ (+0.1 $\sigma$ )	$D_{40}$	1201	$1198^{+69}_{-70}$ (−1.4 $\sigma$ )	$H(0.57)$	91.9	$92.8^{+7.1}_{-7.3}$ (+0.8 $\sigma$ )
$n_s$	0.9687	$0.972^{+0.039}_{-0.037}$ (+1.1 $\sigma$ )	$D_{220}$	5652	$5652^{+160}_{-170}$ (−1.1 $\sigma$ )	$D_A(0.57)$	1400	$1388^{+130}_{-120}$ (−0.9 $\sigma$ )
$y_{cal}$	0.99992	$1.0000^{+0.0048}_{-0.0049}$ (+0.0 $\sigma$ )	$D_{810}$	2513	$2513^{+73}_{-73}$ (−0.5 $\sigma$ )	$F_{AP}(0.57)$	0.6740	$0.6733^{+0.0099}_{-0.0095}$ (−1.1 $\sigma$ )
$c_{TE}$	0.9998	$1.000^{+0.020}_{-0.020}$	$D_{1420}$	814.1	$813^{+34}_{-33}$ (−0.3 $\sigma$ )	$f\sigma_8(0.57)$	0.4573	$0.458^{+0.026}_{-0.025}$ (−0.2 $\sigma$ )
$H_0$	67.2	$68.0^{+7.0}_{-7.1}$ (+0.9 $\sigma$ )	$n_{s,0.002}$	0.9687	$0.972^{+0.039}_{-0.037}$ (+1.1 $\sigma$ )	$\sigma_8(0.57)$	0.5896	$0.593^{+0.043}_{-0.040}$ (+0.5 $\sigma$ )
$\Omega_\Lambda$	0.6966	$0.699^{+0.036}_{-0.039}$ (+1.1 $\sigma$ )	$Y_P$	0.2422	$0.244^{+0.013}_{-0.013}$ (+0.7 $\sigma$ )	$Y_P^{BBN}$	0.2435	$0.245^{+0.013}_{-0.013}$ (+0.7 $\sigma$ )
$\Omega_m$	0.3034	$0.301^{+0.039}_{-0.036}$ (−1.1 $\sigma$ )	Age/Gyr	13.98	$13.9^{+1.0}_{-0.95}$ (−0.8 $\sigma$ )	$\chi^2_{lowEB}$	5430.76	$5431.7$ ( $\nu$ : 0.7) (+0.0 $\sigma$ )
$\Omega_m h^2$	0.1370	$0.139^{+0.014}_{-0.014}$ (+0.4 $\sigma$ )	$z_*$	1089.41	$1089.6^{+1.6}_{-1.5}$ (+0.3 $\sigma$ )	$\chi^2_{CamSpec}$	2694.2	$2700.3$ ( $\nu$ : 6.3)
$\Omega_m h^3$	0.0920	$0.095^{+0.019}_{-0.019}$ (+0.7 $\sigma$ )	$r_*$	147.1	$146.2^{+9.1}_{-8.7}$ (−0.6 $\sigma$ )	$\chi^2_{prior}$	10.03	$12.0$ ( $\nu$ : 2.1) (+1.2 $\sigma$ )
$\sigma_8$	0.7900	$0.794^{+0.051}_{-0.047}$ (+0.3 $\sigma$ )	$100\theta_*$	1.04193	$1.0417^{+0.0026}_{-0.0024}$ (−0.4 $\sigma$ )	$\chi^2_{CMB}$	8125.0	$8132.1$ ( $\nu$ : 7.2) (+400.0 $\sigma$ )
$\sigma_8 \Omega_m^{0.5}$	0.4351	$0.435^{+0.030}_{-0.029}$ (−0.8 $\sigma$ )	$z_{drag}$	1058.94	$1059.3^{+3.3}_{-3.3}$ (+0.7 $\sigma$ )			
$\sigma_8 \Omega_m^{0.25}$	0.5863	$0.588^{+0.034}_{-0.033}$ (−0.4 $\sigma$ )	$r_{drag}$	149.9	$149.0^{+9.4}_{-9.0}$ (−0.6 $\sigma$ )			

Best-fit  $\chi^2_{eff} = 8135.04$ ;  $\Delta\chi^2_{eff} = 1772.40$ ;  $\bar{\chi}^2_{eff} = 8144.09$ ;  $\Delta\bar{\chi}^2_{eff} = 1766.49$ ;  $R - 1 = 0.00592$

$\chi^2_{eff}$ : CMB - lowl\_QU\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 5430.76 ( $\Delta$  0.02) CamSpec like\_v9.10CMH\_unified: 2694.24

## 11.28 base\_nnu\_CamSpecHM\_EE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02305	$0.0219^{+0.0046}_{-0.0043} (+0.3\sigma)$	$\sigma_8/h^{0.5}$	0.961	$0.975^{+0.087}_{-0.081} (-0.0\sigma)$	$k_D$	0.1367	$0.132^{+0.021}_{-0.019} (+0.3\sigma)$
$\Omega_c h^2$	0.1053	$0.101^{+0.035}_{-0.029} (+0.3\sigma)$	$\langle d^2 \rangle^{1/2}$	2.457	$2.49^{+0.19}_{-0.20} (-0.0\sigma)$	$100\theta_D$	0.15737	$0.1575^{+0.0036}_{-0.0032} (+0.0\sigma)$
$100\theta_{MC}$	1.0415	$1.0433^{+0.0067}_{-0.0065} (-0.4\sigma)$	$z_{re}$	7.27	$7.0^{+3.4}_{-3.8} (-0.1\sigma)$	$z_{eq}$	3425	$3503^{+300}_{-310} (-0.0\sigma)$
$\tau$	0.0551	$0.052^{+0.034}_{-0.039} (-0.1\sigma)$	$10^9 A_s$	2.069	$1.99^{+0.31}_{-0.31} (+0.2\sigma)$	$100\theta_{eq}$	0.811	$0.797^{+0.065}_{-0.060} (+0.0\sigma)$
$N_{eff}$	2.27	$< 4.19 (+0.3\sigma)$	$10^9 A_s e^{-2\tau}$	1.853	$1.79^{+0.21}_{-0.21} (+0.3\sigma)$	$r_{drag}/D_V(0.57)$	0.07134	$0.0704^{+0.0051}_{-0.0046} (+0.0\sigma)$
$\ln(10^{10} A_s)$	3.030	$2.99^{+0.15}_{-0.15} (+0.2\sigma)$	$D_{40}$	1287	$1283^{+68}_{-70} (+0.2\sigma)$	$H(0.57)$	88.3	$< 103 (+0.3\sigma)$
$n_s$	0.944	$0.928^{+0.077}_{-0.072} (+0.1\sigma)$	$D_{220}$	5990	$5836^{+520}_{-490} (+0.2\sigma)$	$D_A(0.57)$	1463	$1567^{+400}_{-400} (-0.3\sigma)$
$y_{cal}$	1.00016	$0.99996^{+0.0049}_{-0.0049} (-0.0\sigma)$	$D_{810}$	2588	$2570^{+83}_{-82} (-0.2\sigma)$	$F_{AP}(0.57)$	0.6768	$0.684^{+0.028}_{-0.028} (-0.1\sigma)$
$c_{EE}$	1.0011	$1.000^{+0.020}_{-0.020}$	$D_{1420}$	848.1	$847^{+42}_{-44} (-0.3\sigma)$	$f\sigma_8(0.57)$	0.4480	$0.443^{+0.044}_{-0.040} (+0.3\sigma)$
$H_0$	64.0	$60^{+20}_{-20} (+0.2\sigma)$	$n_{s,0.002}$	0.944	$0.928^{+0.077}_{-0.072} (+0.1\sigma)$	$\sigma_8(0.57)$	0.571	$0.554^{+0.090}_{-0.080} (+0.2\sigma)$
$\Omega_\Lambda$	0.685	$0.65^{+0.12}_{-0.12} (+0.1\sigma)$	$Y_P$	0.2342	$0.226^{+0.036}_{-0.035} (+0.3\sigma)$	$Y_P^{BBN}$	0.2355	$0.227^{+0.036}_{-0.035} (+0.3\sigma)$
$\Omega_m$	0.315	$0.35^{+0.12}_{-0.12} (-0.1\sigma)$	Age/Gyr	14.52	$15.3^{+3.0}_{-3.0} (-0.3\sigma)$	$\chi^2_{lowEB}$	5430.72	$5431.6 (\nu: 0.8) (-0.1\sigma)$
$\Omega_m h^2$	0.1290	$0.123^{+0.038}_{-0.032} (+0.3\sigma)$	$z_*$	1087.04	$1087.4^{+3.0}_{-2.7} (+0.0\sigma)$	$\chi^2_{CamSpec}$	2184.2	$2189.1 (\nu: 6.1)$
$\Omega_m h^3$	0.0826	$< 0.124 (+0.3\sigma)$	$r_*$	152.2	$159^{+30}_{-30} (-0.3\sigma)$	$\chi^2_{prior}$	10.04	$12.0 (\nu: 2.0) (+1.4\sigma)$
$\sigma_8$	0.769	$0.753^{+0.097}_{-0.088} (+0.3\sigma)$	$100\theta_*$	1.0421	$1.0445^{+0.0089}_{-0.0086} (-0.3\sigma)$	$\chi^2_{CMB}$	7614.9	$7620.8 (\nu: 6.9) (+293.4\sigma)$
$\sigma_8 \Omega_m^{0.5}$	0.431	$0.441^{+0.063}_{-0.056} (+0.1\sigma)$	$z_{drag}$	1059.8	$1056^{+15}_{-14} (+0.3\sigma)$			
$\sigma_8 \Omega_m^{0.25}$	0.576	$0.576^{+0.055}_{-0.053} (+0.2\sigma)$	$r_{drag}$	154.7	$162^{+30}_{-30} (-0.3\sigma)$			

Best-fit  $\chi^2_{eff} = 7624.95$ ;  $\Delta\chi^2_{eff} = 1444.84$ ;  $\bar{\chi}^2_{eff} = 7632.82$ ;  $\Delta\bar{\chi}^2_{eff} = 1437.55$ ;  $R - 1 = 0.00783$

$\chi^2_{eff}$ : CMB - lowl\_QU\_70\_dx11d.2014.10.03\_v5c\_Ap: 5430.72 ( $\Delta$  -0.01) CamSpec like\_v9.10CMH\_unified: 2184.18

## 11.29 base\_nnu\_plikHM\_TT\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02170	$0.02176^{+0.00076}_{-0.00073}$	$\Omega_m$	0.3532	$0.349^{+0.051}_{-0.048}$	$D_A/\text{Gpc}$	14.27	$14.18^{+0.52}_{-0.55}$
$\Omega_c h^2$	0.1159	$0.1171^{+0.0083}_{-0.0076}$	$\Omega_m h^2$	0.1382	$0.1395^{+0.0088}_{-0.0079}$	$z_{\text{drag}}$	1057.64	$1058.0^{+2.7}_{-2.6}$
$100\theta_{\text{MC}}$	1.04125	$1.0411^{+0.0012}_{-0.0012}$	$\Omega_m h^3$	0.0865	$0.089^{+0.013}_{-0.012}$	$r_{\text{drag}}$	151.6	$150.7^{+5.9}_{-6.2}$
$\tau$	0.0588	$0.060^{+0.038}_{-0.036}$	$\sigma_8$	0.8058	$0.809^{+0.042}_{-0.037}$	$k_D$	0.13768	$0.1383^{+0.0043}_{-0.0040}$
$N_{\text{eff}}$	2.55	$2.66^{+0.67}_{-0.63}$	$\sigma_8 \Omega_m^{0.5}$	0.4789	$0.477^{+0.029}_{-0.028}$	$100\theta_D$	0.15994	$0.1602^{+0.0015}_{-0.0014}$
$\ln(10^{10} A_s)$	3.040	$3.044^{+0.086}_{-0.080}$	$\sigma_8 \Omega_m^{0.25}$	0.6212	$0.621^{+0.027}_{-0.026}$	$z_{\text{eq}}$	3522	$3504^{+160}_{-160}$
$n_s$	0.9376	$0.941^{+0.035}_{-0.032}$	$\sigma_8/h^{0.5}$	1.0187	$1.017^{+0.038}_{-0.037}$	$k_{\text{eq}}$	0.010387	$0.01041^{+0.00032}_{-0.00031}$
$y_{\text{cal}}$	1.00023	$1.0003^{+0.0048}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.551	$2.54^{+0.11}_{-0.11}$	$100\theta_{\text{eq}}$	0.7906	$0.794^{+0.030}_{-0.028}$
$A_{217}^{\text{CIB}}$	62.5	$63^{+10}_{-10}$	$z_{\text{re}}$	8.16	$8.1^{+3.6}_{-4.0}$	$100\theta_{s,\text{eq}}$	0.4380	$0.440^{+0.015}_{-0.014}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.42	—	$10^9 A_s$	2.091	$2.10^{+0.18}_{-0.18}$	$r_{\text{drag}}/D_V(0.57)$	0.06959	$0.0699^{+0.0023}_{-0.0021}$
$A_{143}^{\text{tSZ}}$	6.98	$5.3^{+3.6}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8589	$1.864^{+0.047}_{-0.048}$	$H(0.57)$	88.8	$89.6^{+5.3}_{-5.0}$
$A_{100}^{\text{PS}}$	245	$255^{+60}_{-60}$	$D_{40}$	1276	$1273^{+53}_{-53}$	$D_A(0.57)$	1476	$1462^{+100}_{-110}$
$A_{143}^{\text{PS}}$	41.6	$42^{+20}_{-20}$	$D_{220}$	5718	$5720^{+78}_{-80}$	$F_{\text{AP}}(0.57)$	0.6863	$0.685^{+0.012}_{-0.012}$
$A_{143 \times 217}^{\text{PS}}$	42.7	$38^{+20}_{-20}$	$D_{810}$	2531.1	$2531^{+28}_{-28}$	$f\sigma_8(0.57)$	0.4779	$0.479^{+0.020}_{-0.019}$
$A_{217}^{\text{PS}}$	102.2	$97^{+20}_{-20}$	$D_{1420}$	815.9	$814^{+10}_{-10}$	$\sigma_8(0.57)$	0.5901	$0.594^{+0.038}_{-0.036}$
$A^{\text{kSZ}}$	0.00	$< 8.05$	$D_{2000}$	232.23	$231.2^{+4.5}_{-4.5}$	$f_{2000}^{143}$	27.3	$29^{+7}_{-7}$
$A_{100}^{\text{dustTT}}$	7.24	$7.2^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9376	$0.941^{+0.035}_{-0.032}$	$f_{2000}^{143 \times 217}$	30.5	$31^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	8.96	$8.9^{+3.6}_{-3.7}$	$Y_{\text{P}}$	0.2381	$0.2396^{+0.0097}_{-0.0090}$	$f_{2000}^{217}$	104.15	$105.1^{+4.7}_{-4.7}$
$A_{143 \times 217}^{\text{dustTT}}$	17.9	$17.0^{+8.2}_{-8.2}$	$Y_{\text{P}}^{\text{BBN}}$	0.2394	$0.2409^{+0.0097}_{-0.0090}$	$\chi_{\text{lowEB}}^2$	5430.94	$5431.9 (\nu: 1.3)$
$A_{217}^{\text{dustTT}}$	82.8	$82^{+10}_{-10}$	$10^5 D/H$	2.543	$2.57^{+0.14}_{-0.13}$	$\chi_{\text{plik}}^2$	762.3	$777.0 (\nu: 15.2)$
$c_{100}$	0.99797	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	14.38	$14.27^{+0.71}_{-0.75}$	$\chi_{\text{prior}}^2$	1.7	$7.2 (\nu: 6.1)$
$c_{217}$	0.99569	$0.9958^{+0.0029}_{-0.0029}$	$z_*$	1089.91	$1090.05^{+0.97}_{-0.94}$	$\chi_{\text{CMB}}^2$	6193.3	$6208.9 (\nu: 16.0)$
$H_0$	62.6	$63.4^{+5.9}_{-5.3}$	$r_*$	148.6	$147.8^{+5.6}_{-5.9}$			
$\Omega_\Lambda$	0.6468	$0.651^{+0.048}_{-0.051}$	$100\theta_*$	1.04182	$1.0416^{+0.0015}_{-0.0015}$			

Best-fit  $\chi_{\text{eff}}^2 = 6194.93$ ;  $\bar{\chi}_{\text{eff}}^2 = 6216.10$ ;  $R - 1 = 0.01012$

$\chi_{\text{eff}}^2$ : CMB - lowl\_QU\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 5430.94 plik\_dx11dr2\_HM\_v18.TT: 762.32

### 11.30 base\_nnu\_plikHM\_TTTEEE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.021959	$0.02199^{+0.00051}_{-0.00048}$	$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.17}_{-0.17}$	Age/Gyr	14.127	$14.07^{+0.44}_{-0.44}$
$\Omega_c h^2$	0.1167	$0.1176^{+0.0062}_{-0.0059}$	$A_{143}^{\text{dustTE}}$	0.156	$0.16^{+0.11}_{-0.10}$	$z_*$	1089.86	$1089.95^{+0.71}_{-0.69}$
$100\theta_{\text{MC}}$	1.04113	$1.04104^{+0.00089}_{-0.00087}$	$A_{143 \times 217}^{\text{dustTE}}$	0.340	$0.34^{+0.16}_{-0.16}$	$r_*$	147.09	$146.6^{+3.9}_{-3.8}$
$\tau$	0.0671	$0.068^{+0.034}_{-0.032}$	$A_{217}^{\text{dustTE}}$	1.67	$1.68^{+0.51}_{-0.50}$	$100\theta_*$	1.04155	$1.0414^{+0.0011}_{-0.0011}$
$N_{\text{eff}}$	2.759	$2.82^{+0.42}_{-0.40}$	$c_{100}$	0.99828	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	14.122	$14.07^{+0.36}_{-0.36}$
$\ln(10^{10} A_s)$	3.061	$3.065^{+0.072}_{-0.071}$	$c_{217}$	0.99578	$0.9959^{+0.0029}_{-0.0028}$	$z_{\text{drag}}$	1058.52	$1058.7^{+1.8}_{-1.7}$
$n_s$	0.9500	$0.952^{+0.020}_{-0.020}$	$H_0$	64.89	$65.3^{+3.3}_{-3.1}$	$r_{\text{drag}}$	149.93	$149.4^{+4.1}_{-4.0}$
$y_{\text{cal}}$	1.00025	$1.0003^{+0.0049}_{-0.0049}$	$\Omega_\Lambda$	0.6691	$0.671^{+0.025}_{-0.025}$	$k_D$	0.13873	$0.1391^{+0.0030}_{-0.0029}$
$A_{217}^{\text{CIB}}$	63.4	$63^{+10}_{-10}$	$\Omega_m$	0.3309	$0.329^{+0.025}_{-0.025}$	$100\theta_D$	0.16035	$0.16050^{+0.00085}_{-0.00086}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.42	—	$\Omega_m h^2$	0.1393	$0.1402^{+0.0065}_{-0.0062}$	$z_{\text{eq}}$	3447	$3440^{+81}_{-84}$
$A_{143}^{\text{tSZ}}$	6.95	$5.3^{+3.6}_{-3.8}$	$\Omega_m h^3$	0.0904	$0.0916^{+0.0082}_{-0.0076}$	$k_{\text{eq}}$	0.010315	$0.01034^{+0.00024}_{-0.00023}$
$A_{100}^{\text{PS}}$	251	$260^{+50}_{-50}$	$\sigma_8$	0.8131	$0.816^{+0.034}_{-0.033}$	$100\theta_{\text{eq}}$	0.8042	$0.806^{+0.016}_{-0.015}$
$A_{143}^{\text{PS}}$	43.5	$43^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4678	$0.468^{+0.019}_{-0.019}$	$100\theta_{\text{s,eq}}$	0.4449	$0.4456^{+0.0081}_{-0.0076}$
$A_{143 \times 217}^{\text{PS}}$	44.2	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6167	$0.618^{+0.023}_{-0.022}$	$r_{\text{drag}}/D_V(0.57)$	0.07062	$0.0707^{+0.0012}_{-0.0011}$
$A_{217}^{\text{PS}}$	102.6	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0095	$1.010^{+0.032}_{-0.031}$	$H(0.57)$	90.61	$91.0^{+3.2}_{-3.0}$
$A^{\text{kSZ}}$	0.00	$< 7.81$	$\langle d^2 \rangle^{1/2}$	2.518	$2.518^{+0.078}_{-0.078}$	$D_A(0.57)$	1435	$1428^{+59}_{-59}$
$A_{100}^{\text{dustTT}}$	7.27	$7.3^{+3.6}_{-3.7}$	$z_{\text{re}}$	8.94	$9.0^{+3.1}_{-3.3}$	$F_{\text{AP}}(0.57)$	0.6809	$0.6804^{+0.0060}_{-0.0062}$
$A_{143}^{\text{dustTT}}$	8.80	$8.8^{+3.6}_{-3.6}$	$10^9 A_s$	2.135	$2.14^{+0.16}_{-0.15}$	$f\sigma_8(0.57)$	0.4775	$0.479^{+0.018}_{-0.018}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$16.9^{+8.2}_{-8.0}$	$10^9 A_s e^{-2\tau}$	1.8672	$1.870^{+0.036}_{-0.037}$	$\sigma_8(0.57)$	0.6004	$0.603^{+0.029}_{-0.027}$
$A_{217}^{\text{dustTT}}$	82.2	$82^{+10}_{-10}$	$D_{40}$	1259.7	$1259^{+35}_{-34}$	$f_{2000}^{143}$	28.0	$29^{+6}_{-6}$
$A_{100}^{\text{dustEE}}$	0.0799	$0.080^{+0.011}_{-0.011}$	$D_{220}$	5735	$5736^{+79}_{-77}$	$f_{2000}^{143 \times 217}$	31.27	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0474	$0.0476^{+0.010}_{-0.0098}$	$D_{810}$	2534.1	$2533^{+27}_{-26}$	$f_{2000}^{217}$	104.80	$105.5^{+4.0}_{-3.9}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.100^{+0.063}_{-0.064}$	$D_{1420}$	815.8	$814.5^{+9.5}_{-9.3}$	$\chi_{\text{lowEB}}^2$	5431.43	$5432.3 (\nu: 1.7)$
$A_{143}^{\text{dustEE}}$	0.0986	$0.099^{+0.014}_{-0.014}$	$D_{2000}$	231.48	$230.8^{+3.6}_{-3.5}$	$\chi_{\text{plik}}^2$	2431.5	$2451.2 (\nu: 23.0)$
$A_{143 \times 217}^{\text{dustEE}}$	0.226	$0.225^{+0.092}_{-0.093}$	$n_{\text{s},0.002}$	0.9500	$0.952^{+0.020}_{-0.020}$	$\chi_{\text{prior}}^2$	6.1	$18.8 (\nu: 14.7)$
$A_{217}^{\text{dustEE}}$	0.652	$0.66^{+0.26}_{-0.25}$	$Y_{\text{P}}$	0.2412	$0.2420^{+0.0059}_{-0.0059}$	$\chi_{\text{CMB}}^2$	7862.9	$7883.5 (\nu: 22.9)$
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.074}_{-0.073}$	$Y_{\text{P}}^{\text{BBN}}$	0.2425	$0.2434^{+0.0059}_{-0.0059}$			
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.131^{+0.057}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.568	$2.582^{+0.092}_{-0.091}$			

Best-fit  $\chi_{\text{eff}}^2 = 7869.05$ ;  $\bar{\chi}_{\text{eff}}^2 = 7902.25$ ;  $R - 1 = 0.01108$

$\chi_{\text{eff}}^2$ : CMB - lowl\_QU\_70\_dx11d.2014.10.03\_v5c\_Ap: 5431.43 plik\_dx11dr2\_HM\_v18.TTTEEE: 2431.50

### 11.31 base\_nnu\_plikHM\_TT\_tau07

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02184	$0.02191^{+0.00076}_{-0.00072}$	$\Omega_\Lambda$	0.6575	$0.661^{+0.046}_{-0.049}$	$r_*$	147.9	$147.1^{+5.8}_{-5.8}$
$\Omega_c h^2$	0.1163	$0.1173^{+0.0083}_{-0.0078}$	$\Omega_m$	0.3425	$0.339^{+0.049}_{-0.046}$	$100\theta_*$	1.04172	$1.0416^{+0.0015}_{-0.0015}$
$100\theta_{MC}$	1.04122	$1.0411^{+0.0012}_{-0.0012}$	$\Omega_m h^2$	0.1388	$0.1399^{+0.0088}_{-0.0082}$	$D_A/\text{Gpc}$	14.20	$14.13^{+0.53}_{-0.54}$
$\tau$	0.0774	$0.077^{+0.037}_{-0.037}$	$\Omega_m h^3$	0.0884	$0.090^{+0.013}_{-0.012}$	$z_{\text{drag}}$	1058.10	$1058.4^{+2.7}_{-2.5}$
$N_{\text{eff}}$	2.65	$2.74^{+0.66}_{-0.65}$	$\sigma_8$	0.8213	$0.823^{+0.041}_{-0.039}$	$r_{\text{drag}}$	150.8	$150.0^{+6.0}_{-6.0}$
$\ln(10^{10} A_s)$	3.079	$3.080^{+0.082}_{-0.082}$	$\sigma_8 \Omega_m^{0.5}$	0.4806	$0.479^{+0.028}_{-0.028}$	$k_D$	0.13822	$0.1388^{+0.0043}_{-0.0040}$
$n_s$	0.9442	$0.947^{+0.034}_{-0.033}$	$\sigma_8 \Omega_m^{0.25}$	0.6283	$0.628^{+0.027}_{-0.026}$	$100\theta_D$	0.16011	$0.1603^{+0.0015}_{-0.0014}$
$A_{217}^{\text{CIB}}$	62.8	$63^{+10}_{-10}$	$\sigma_8/h^{0.5}$	1.0293	$1.026^{+0.039}_{-0.037}$	$z_{\text{eq}}$	3488	$3473^{+160}_{-160}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.39	—	$\langle d^2 \rangle^{1/2}$	2.571	$2.56^{+0.11}_{-0.11}$	$k_{\text{eq}}$	0.010357	$0.01037^{+0.00031}_{-0.00031}$
$A_{143}^{\text{tSZ}}$	7.04	$5.3^{+3.6}_{-3.8}$	$z_{\text{re}}$	9.92	$9.8^{+3.5}_{-3.5}$	$100\theta_{\text{eq}}$	0.7968	$0.800^{+0.030}_{-0.028}$
$A_{100}^{\text{PS}}$	246	$254^{+60}_{-60}$	$10^9 A_s$	2.173	$2.18^{+0.18}_{-0.17}$	$100\theta_{s,\text{eq}}$	0.4412	$0.443^{+0.015}_{-0.014}$
$A_{143}^{\text{PS}}$	41.0	$42^{+20}_{-20}$	$10^9 A_s e^{-2\tau}$	1.8617	$1.866^{+0.047}_{-0.049}$	$r_{\text{drag}}/D_V(0.57)$	0.07007	$0.0703^{+0.0023}_{-0.0021}$
$A_{143 \times 217}^{\text{PS}}$	41.7	$39^{+20}_{-20}$	$D_{40}$	1272	$1269^{+52}_{-52}$	$H(0.57)$	89.7	$90.4^{+5.2}_{-5.1}$
$A_{217}^{\text{PS}}$	101.7	$98^{+20}_{-20}$	$D_{220}$	5720	$5723^{+82}_{-79}$	$D_A(0.57)$	1456	$1444^{+100}_{-100}$
$A^{\text{kSZ}}$	0.00	$< 8.02$	$D_{810}$	2530.1	$2530^{+29}_{-28}$	$F_{\text{AP}}(0.57)$	0.6837	$0.683^{+0.012}_{-0.011}$
$A_{100}^{\text{dustTT}}$	7.23	$7.2^{+3.7}_{-3.7}$	$D_{1420}$	815.2	$814^{+10}_{-10}$	$f\sigma_8(0.57)$	0.4848	$0.485^{+0.020}_{-0.020}$
$A_{143}^{\text{dustTT}}$	8.88	$8.9^{+3.6}_{-3.6}$	$D_{2000}$	232.12	$231.4^{+4.5}_{-4.6}$	$\sigma_8(0.57)$	0.6038	$0.606^{+0.038}_{-0.035}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$16.9^{+8.0}_{-8.2}$	$n_{s,0.002}$	0.9442	$0.947^{+0.034}_{-0.033}$	$f_{2000}^{143}$	27.2	$29^{+7}_{-7}$
$A_{217}^{\text{dustTT}}$	82.6	$82^{+10}_{-10}$	$Y_P$	0.2396	$0.2408^{+0.0095}_{-0.0092}$	$f_{2000}^{143 \times 217}$	30.5	$31^{+5}_{-5}$
$c_{100}$	0.99802	$0.9979^{+0.0015}_{-0.0016}$	$Y_P^{\text{BBN}}$	0.2409	$0.2421^{+0.0095}_{-0.0092}$	$f_{2000}^{217}$	104.12	$105.0^{+4.9}_{-4.8}$
$c_{217}$	0.99570	$0.9958^{+0.0028}_{-0.0029}$	$10^5 \text{D/H}$	2.550	$2.57^{+0.14}_{-0.14}$	$\chi_{\text{plik}}^2$	761.6	$776.3 (\nu: 15.2)$
$y_{\text{cal}}$	1.00014	$1.0003^{+0.0049}_{-0.0048}$	Age/Gyr	14.26	$14.17^{+0.72}_{-0.73}$	$\chi_{\text{prior}}^2$	1.7	$8.2 (\nu: 7.3)$
$H_0$	63.7	$64.4^{+6.0}_{-5.4}$	$z_*$	1089.86	$1089.96^{+0.99}_{-0.96}$			

Best-fit  $\chi_{\text{eff}}^2 = 763.38$ ;  $\bar{\chi}_{\text{eff}}^2 = 784.49$ ;  $R - 1 = 0.00828$   
 $\chi_{\text{eff}}^2$ : CMB - plik\_dx11dr2\_HM\_v18\_TT: 761.63



### 11.32 base\_nnu\_plikHM\_TTTEEE\_tau07

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022040	$0.02206^{+0.00048}_{-0.00047}$	$A_{100 \times 217}^{\text{dust}TE}$	0.301	$0.30^{+0.17}_{-0.17}$	$Y_P^{\text{BBN}}$	0.2431	$0.2438^{+0.0056}_{-0.0057}$
$\Omega_c h^2$	0.1168	$0.1175^{+0.0061}_{-0.0059}$	$A_{143}^{\text{dust}TE}$	0.155	$0.15^{+0.10}_{-0.11}$	$10^5 \text{D/H}$	2.565	$2.580^{+0.093}_{-0.091}$
$100\theta_{\text{MC}}$	1.04113	$1.04104^{+0.00089}_{-0.00089}$	$A_{143 \times 217}^{\text{dust}TE}$	0.339	$0.34^{+0.16}_{-0.16}$	Age/Gyr	14.079	$14.03^{+0.43}_{-0.42}$
$\tau$	0.0834	$0.082^{+0.033}_{-0.034}$	$A_{217}^{\text{dust}TE}$	1.67	$1.67^{+0.50}_{-0.50}$	$z_*$	1089.80	$1089.89^{+0.71}_{-0.70}$
$N_{\text{eff}}$	2.796	$2.85^{+0.39}_{-0.39}$	$c_{100}$	0.99830	$0.9982^{+0.0015}_{-0.0015}$	$r_*$	146.81	$146.4^{+3.8}_{-3.7}$
$\ln(10^{10} A_s)$	3.094	$3.093^{+0.068}_{-0.070}$	$c_{217}$	0.99577	$0.9959^{+0.0028}_{-0.0029}$	$100\theta_*$	1.04151	$1.0414^{+0.0011}_{-0.0011}$
$n_s$	0.9532	$0.954^{+0.019}_{-0.019}$	$y_{\text{cal}}$	1.00014	$1.0002^{+0.0049}_{-0.0048}$	$D_A/\text{Gpc}$	14.096	$14.05^{+0.35}_{-0.34}$
$A_{217}^{\text{CIB}}$	62.3	$63^{+10}_{-10}$	$H_0$	65.36	$65.7^{+3.2}_{-3.1}$	$z_{\text{drag}}$	1058.71	$1058.9^{+1.7}_{-1.7}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.50	—	$\Omega_\Lambda$	0.6735	$0.675^{+0.023}_{-0.025}$	$r_{\text{drag}}$	149.62	$149.2^{+4.0}_{-3.9}$
$A_{143}^{\text{tSZ}}$	6.84	$5.4^{+3.5}_{-3.7}$	$\Omega_m$	0.3265	$0.325^{+0.025}_{-0.023}$	$k_D$	0.13896	$0.1393^{+0.0028}_{-0.0028}$
$A_{100}^{\text{PS}}$	251	$258^{+50}_{-50}$	$\Omega_m h^2$	0.1395	$0.1402^{+0.0063}_{-0.0062}$	$100\theta_D$	0.16038	$0.16052^{+0.00086}_{-0.00085}$
$A_{143}^{\text{PS}}$	44.0	$42^{+20}_{-20}$	$\Omega_m h^3$	0.0912	$0.0922^{+0.0078}_{-0.0075}$	$z_{\text{eq}}$	3433	$3428^{+82}_{-81}$
$A_{143 \times 217}^{\text{PS}}$	45.9	$40^{+20}_{-20}$	$\sigma_8$	0.8264	$0.827^{+0.033}_{-0.032}$	$k_{\text{eq}}$	0.010300	$0.01032^{+0.00024}_{-0.00024}$
$A_{217}^{\text{PS}}$	103.8	$98^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4722	$0.472^{+0.020}_{-0.019}$	$100\theta_{\text{eq}}$	0.8069	$0.808^{+0.015}_{-0.015}$
$A^{\text{kSZ}}$	0.00	$< 7.54$	$\sigma_8 \Omega_m^{0.25}$	0.6247	$0.624^{+0.023}_{-0.023}$	$100\theta_{\text{s,eq}}$	0.4463	$0.4468^{+0.0078}_{-0.0077}$
$A_{100}^{\text{dust}TT}$	7.13	$7.3^{+3.7}_{-3.7}$	$\sigma_8/h^{0.5}$	1.0222	$1.020^{+0.032}_{-0.033}$	$r_{\text{drag}}/D_V(0.57)$	0.07083	$0.0709^{+0.0012}_{-0.0012}$
$A_{143}^{\text{dust}TT}$	8.80	$8.8^{+3.7}_{-3.6}$	$\langle d^2 \rangle^{1/2}$	2.547	$2.542^{+0.080}_{-0.082}$	$H(0.57)$	90.98	$91.3^{+3.0}_{-2.9}$
$A_{143 \times 217}^{\text{dust}TT}$	17.8	$16.7^{+8.2}_{-8.1}$	$z_{\text{re}}$	10.43	$10.3^{+3.0}_{-3.1}$	$D_A(0.57)$	1427	$1421^{+58}_{-56}$
$A_{217}^{\text{dust}TT}$	82.6	$82^{+10}_{-10}$	$10^9 A_s$	2.207	$2.21^{+0.15}_{-0.15}$	$F_{\text{AP}}(0.57)$	0.6798	$0.6795^{+0.0060}_{-0.0059}$
$A_{100}^{\text{dust}EE}$	0.0804	$0.080^{+0.011}_{-0.011}$	$10^9 A_s e^{-2\tau}$	1.8678	$1.871^{+0.036}_{-0.036}$	$f\sigma_8(0.57)$	0.4842	$0.484^{+0.018}_{-0.017}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0478	$0.0478^{+0.0098}_{-0.0096}$	$D_{40}$	1260.8	$1260^{+35}_{-33}$	$\sigma_8(0.57)$	0.6112	$0.612^{+0.027}_{-0.027}$
$A_{100 \times 217}^{\text{dust}EE}$	0.0997	$0.100^{+0.063}_{-0.063}$	$D_{220}$	5735	$5737^{+75}_{-73}$	$f_{2000}^{143}$	27.5	$29^{+6}_{-6}$
$A_{143}^{\text{dust}EE}$	0.0992	$0.099^{+0.014}_{-0.014}$	$D_{810}$	2533.1	$2532^{+27}_{-26}$	$f_{2000}^{143 \times 217}$	30.87	$31^{+4}_{-4}$
$A_{143 \times 217}^{\text{dust}EE}$	0.227	$0.225^{+0.093}_{-0.091}$	$D_{1420}$	815.5	$814.3^{+9.3}_{-9.1}$	$f_{2000}^{217}$	104.47	$105.2^{+4.0}_{-4.0}$
$A_{217}^{\text{dust}EE}$	0.654	$0.65^{+0.25}_{-0.25}$	$D_{2000}$	231.69	$231.0^{+3.5}_{-3.5}$	$\chi_{\text{plik}}^2$	2430.2	$2450.0 (\nu: 22.3)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.075}_{-0.075}$	$n_{\text{s},0.002}$	0.9532	$0.954^{+0.019}_{-0.019}$	$\chi_{\text{prior}}^2$	6.5	$19.9 (\nu: 15.9)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.131^{+0.057}_{-0.058}$	$Y_P$	0.2418	$0.2425^{+0.0055}_{-0.0057}$			

Best-fit  $\chi_{\text{eff}}^2 = 2436.74$ ;  $\bar{\chi}_{\text{eff}}^2 = 2469.87$ ;  $R - 1 = 0.00709$   
 $\chi_{\text{eff}}^2$ : CMB - plik\_dx11dr2\_HM.v18\_TTTEEE: 2430.21

### 11.33 base\_nnu\_CamSpecHM\_TT\_tau07

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02193^{+0.00074}_{-0.00072} (+0.0\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$r_*$	$147.3^{+5.7}_{-5.5} (+0.1\sigma)$
$\Omega_c h^2$	$0.1169^{+0.0080}_{-0.0078} (-0.1\sigma)$	$H_0$	$64.5^{+5.7}_{-5.3} (+0.0\sigma)$	$100\theta_*$	$1.0417^{+0.0016}_{-0.0015} (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.0412^{+0.0012}_{-0.0012} (+0.1\sigma)$	$\Omega_\Lambda$	$0.663^{+0.044}_{-0.049} (+0.1\sigma)$	$z_{\text{drag}}$	$1058.4^{+2.6}_{-2.5} (-0.0\sigma)$
$\tau$	$0.078^{+0.037}_{-0.036} (+0.0\sigma)$	$\Omega_m$	$0.337^{+0.049}_{-0.044} (-0.1\sigma)$	$r_{\text{drag}}$	$150.2^{+6.0}_{-5.8} (+0.1\sigma)$
$N_{\text{eff}}$	$2.73^{+0.64}_{-0.61} (-0.0\sigma)$	$\Omega_m h^2$	$0.1394^{+0.0084}_{-0.0082} (-0.1\sigma)$	$k_D$	$0.1387^{+0.0041}_{-0.0041} (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.078^{+0.083}_{-0.080} (-0.0\sigma)$	$\Omega_m h^3$	$0.090^{+0.013}_{-0.011} (-0.0\sigma)$	$100\theta_D$	$0.1603^{+0.0014}_{-0.0014} (-0.1\sigma)$
$n_s$	$0.950^{+0.033}_{-0.032} (+0.1\sigma)$	$\sigma_8$	$0.822^{+0.041}_{-0.038} (-0.1\sigma)$	$z_{\text{eq}}$	$3467^{+160}_{-150} (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$241^{+50}_{-50} (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.476^{+0.029}_{-0.028} (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.801^{+0.029}_{-0.028} (+0.1\sigma)$
$A_{143}^{\text{PS}}$	$36^{+20}_{-20} (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.626^{+0.027}_{-0.026} (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0704^{+0.0022}_{-0.0021} (+0.1\sigma)$
$A_{217}^{\text{PS}}$	$99^{+30}_{-30} (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.024^{+0.039}_{-0.038} (-0.1\sigma)$	$H(0.57)$	$90.4^{+5.1}_{-4.8} (-0.0\sigma)$
$A_{217}^{\text{CIB}}$	$44^{+10}_{-10} (-2.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.55^{+0.11}_{-0.11} (-0.2\sigma)$	$D_A(0.57)$	$1443^{+100}_{-98} (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.88 (-1.0\sigma)$	$z_{\text{re}}$	$9.9^{+3.2}_{-3.5} (+0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.682^{+0.012}_{-0.011} (-0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.24}_{-0.22}$	$10^9 A_s$	$2.17^{+0.19}_{-0.17} (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.483^{+0.020}_{-0.019} (-0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.860^{+0.046}_{-0.048} (-0.3\sigma)$	$\sigma_8(0.57)$	$0.606^{+0.037}_{-0.034} (-0.0\sigma)$
$A^{\text{kSZ}}$	—	$D_{40}$	$1259^{+51}_{-50} (-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.2417^{+0.0090}_{-0.0091} (-0.1\sigma)$
$A_{100}^{\text{dust}}$	$0.97^{+0.38}_{-0.38}$	$D_{220}$	$5701^{+82}_{-80} (-0.5\sigma)$	$f_{2000}^{143}$	$27^{+7}_{-7} (-0.4\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.35}$	$D_{810}$	$2526^{+28}_{-28} (-0.3\sigma)$	$f_{2000}^{217}$	$105.1^{+4.8}_{-4.8} (+0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.23^{+0.23}_{-0.23}$	$D_{1420}$	$814^{+10}_{-10} (+0.0\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+5}_{-5} (-0.4\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.97^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.950^{+0.033}_{-0.032} (+0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8059.0 (\nu: 16.5)$
$y_{\text{cal}}$	$1.0001^{+0.0049}_{-0.0049} (-0.1\sigma)$	$Y_{\text{P}}$	$0.2403^{+0.0090}_{-0.0091} (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$9.4 (\nu: 7.2) (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	Age/Gyr	$14.17^{+0.72}_{-0.70} (+0.0\sigma)$		
$c_{217}$	$0.9970^{+0.0035}_{-0.0035} (+0.9\sigma)$	$z_*$	$1089.87^{+0.98}_{-0.97} (-0.2\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 8068.43; \Delta \bar{\chi}_{\text{eff}}^2 = 7283.94; R - 1 = 0.01002$$

### 11.34 base\_nnu\_plikHM\_TT\_lowTEB\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022318	$0.02233^{+0.00047}_{-0.00047}$	$\Omega_m h^2$	0.1430	$0.1437^{+0.0080}_{-0.0077}$	$r_{\text{drag}}$	146.80	$146.5^{+4.5}_{-4.4}$
$\Omega_c h^2$	0.1201	$0.1207^{+0.0077}_{-0.0074}$	$\Omega_m h^3$	0.0973	$0.0981^{+0.0094}_{-0.0087}$	$k_D$	0.14088	$0.1411^{+0.0033}_{-0.0032}$
$100\theta_{\text{MC}}$	1.04087	$1.0408^{+0.0011}_{-0.0011}$	$\sigma_8$	0.8342	$0.835^{+0.039}_{-0.038}$	$100\theta_D$	0.16107	$0.1612^{+0.0011}_{-0.0011}$
$\tau$	0.0827	$0.082^{+0.035}_{-0.036}$	$\sigma_8 \Omega_m^{0.5}$	0.4637	$0.464^{+0.021}_{-0.021}$	$z_{\text{eq}}$	3373	$3370^{+65}_{-62}$
$N_{\text{eff}}$	3.112	$3.15^{+0.47}_{-0.44}$	$\sigma_8 \Omega_m^{0.25}$	0.6220	$0.622^{+0.027}_{-0.027}$	$k_{\text{eq}}$	0.010339	$0.01036^{+0.00029}_{-0.00029}$
$\ln(10^{10} A_s)$	3.101	$3.100^{+0.074}_{-0.075}$	$\sigma_8/h^{0.5}$	1.0114	$1.011^{+0.037}_{-0.037}$	$100\theta_{\text{eq}}$	0.8185	$0.819^{+0.012}_{-0.012}$
$n_s$	0.9697	$0.971^{+0.018}_{-0.017}$	$\langle d^2 \rangle^{1/2}$	2.495	$2.491^{+0.084}_{-0.085}$	$100\theta_{s,\text{eq}}$	0.4521	$0.4524^{+0.0061}_{-0.0062}$
$y_{\text{cal}}$	1.00045	$1.0003^{+0.0048}_{-0.0050}$	$z_{\text{re}}$	10.40	$10.3^{+3.2}_{-3.3}$	$r_{\text{drag}}/D_V(0.57)$	0.07171	$0.07174^{+0.00092}_{-0.00091}$
$A_{217}^{\text{CIB}}$	67.1	$64^{+10}_{-10}$	$10^9 A_s$	2.221	$2.22^{+0.17}_{-0.16}$	$H(0.57)$	93.47	$93.7^{+3.2}_{-3.1}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8828	$1.884^{+0.040}_{-0.042}$	$D_A(0.57)$	1380	$1376^{+53}_{-52}$
$A_{143}^{\text{tSZ}}$	7.17	$5.0^{+3.7}_{-3.8}$	$D_{40}$	1231.9	$1231^{+31}_{-30}$	$F_{\text{AP}}(0.57)$	0.67540	$0.6752^{+0.0045}_{-0.0043}$
$A_{100}^{\text{PS}}$	254	$260^{+60}_{-60}$	$D_{220}$	5720	$5718^{+79}_{-79}$	$f\sigma_8(0.57)$	0.4844	$0.485^{+0.021}_{-0.021}$
$A_{143}^{\text{PS}}$	38.9	$45^{+20}_{-20}$	$D_{810}$	2535.4	$2535^{+28}_{-28}$	$\sigma_8(0.57)$	0.6212	$0.622^{+0.031}_{-0.030}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{1420}$	814.8	$814^{+10}_{-10}$	$f_{2000}^{143}$	29.8	$31^{+7}_{-6}$
$A_{217}^{\text{PS}}$	97.7	$97^{+20}_{-20}$	$D_{2000}$	230.31	$229.9^{+4.3}_{-4.4}$	$f_{2000}^{143 \times 217}$	32.42	$33^{+5}_{-5}$
$A^{\text{kSZ}}$	0.0	—	$n_{s,0.002}$	0.9697	$0.971^{+0.018}_{-0.017}$	$f_{2000}^{217}$	106.15	$106.4^{+4.5}_{-4.5}$
$A_{100}^{\text{dustTT}}$	7.36	$7.5^{+3.7}_{-3.6}$	$Y_{\text{P}}$	0.2463	$0.2468^{+0.0062}_{-0.0062}$	$\chi_{\text{lowTEB}}^2$	10496.29	$10496.9 (\nu: 3.1)$
$A_{143}^{\text{dustTT}}$	9.07	$9.0^{+3.6}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.2476	$0.2481^{+0.0062}_{-0.0062}$	$\chi_{\text{plik}}^2$	763.6	$777.8 (\nu: 16.9)$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.2^{+8.2}_{-8.2}$	$10^5 \text{D/H}$	2.624	$2.64^{+0.13}_{-0.13}$	$\chi_{6\text{DF}}^2$	0.016	$0.062 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$\text{Age/Gyr}$	13.736	$13.70^{+0.45}_{-0.44}$	$\chi_{\text{MGS}}^2$	1.34	$1.47 (\nu: 0.2)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1090.06	$1090.14^{+0.97}_{-0.94}$	$\chi_{\text{DR11CMass}}^2$	2.43	$2.97 (\nu: 0.3)$
$c_{217}$	0.99594	$0.9960^{+0.0029}_{-0.0029}$	$r_*$	144.12	$143.8^{+4.3}_{-4.3}$	$\chi_{\text{DR11LOWZ}}^2$	0.55	$0.68 (\nu: 0.2)$
$H_0$	68.03	$68.3^{+3.0}_{-2.9}$	$100\theta_*$	1.04101	$1.0409^{+0.0013}_{-0.0013}$	$\chi_{\text{prior}}^2$	2.1	$7.3 (\nu: 6.4)$
$\Omega_\Lambda$	0.6910	$0.692^{+0.017}_{-0.018}$	$D_A/\text{Gpc}$	13.845	$13.82^{+0.40}_{-0.40}$	$\chi_{\text{CMB}}^2$	11259.9	$11274.7 (\nu: 15.1)$
$\Omega_m$	0.3090	$0.308^{+0.018}_{-0.017}$	$z_{\text{drag}}$	1059.86	$1060.0^{+1.7}_{-1.7}$	$\chi_{\text{BAO}}^2$	4.33	$5.2 (\nu: 0.7)$

Best-fit  $\chi_{\text{eff}}^2 = 11266.34$ ;  $\bar{\chi}_{\text{eff}}^2 = 11287.24$ ;  $R - 1 = 0.01093$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.02 MGS: 1.34 DR11CMass: 2.43 DR11LOWZ: 0.55 CMB - lowl.SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10496.30 plik\_dx11dr2\_HM\_v18\_TT: 763.64

### 11.35 base\_nnu\_plikHM\_TT\_lowTEB\_BAO\_post\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022365	$0.02238^{+0.00044}_{-0.00045}$	$\Omega_m h^3$	0.0984	$0.0994^{+0.0086}_{-0.0081}$	$100\theta_D$	0.16118	$0.1613^{+0.0011}_{-0.0010}$
$\Omega_c h^2$	0.1206	$0.1215^{+0.0073}_{-0.0070}$	$\sigma_8$	0.8369	$0.839^{+0.038}_{-0.037}$	$z_{\text{eq}}$	3362	$3362^{+61}_{-59}$
$100\theta_{\text{MC}}$	1.04079	$1.0407^{+0.0011}_{-0.0010}$	$\sigma_8 \Omega_m^{0.5}$	0.4631	$0.464^{+0.022}_{-0.021}$	$k_{\text{eq}}$	0.010345	$0.01038^{+0.00028}_{-0.00028}$
$\tau$	0.0843	$0.083^{+0.035}_{-0.036}$	$\sigma_8 \Omega_m^{0.25}$	0.6225	$0.624^{+0.027}_{-0.027}$	$100\theta_{\text{eq}}$	0.8204	$0.821^{+0.011}_{-0.011}$
$N_{\text{eff}}$	3.166	$3.22^{+0.43}_{-0.41}$	$\sigma_8/h^{0.5}$	1.0112	$1.012^{+0.038}_{-0.037}$	$100\theta_{\text{s,eq}}$	0.4531	$0.4532^{+0.0058}_{-0.0058}$
$\ln(10^{10} A_s)$	3.105	$3.105^{+0.073}_{-0.075}$	$\langle d^2 \rangle^{1/2}$	2.491	$2.490^{+0.084}_{-0.086}$	$r_{\text{drag}}/D_V(0.57)$	0.07185	$0.07186^{+0.00087}_{-0.00087}$
$n_s$	0.9723	$0.973^{+0.016}_{-0.016}$	$z_{\text{re}}$	10.55	$10.4^{+3.0}_{-3.4}$	$H(0.57)$	93.89	$94.2^{+2.9}_{-2.8}$
$y_{\text{cal}}$	1.00030	$1.0003^{+0.0049}_{-0.0049}$	$10^9 A_s$	2.231	$2.23^{+0.17}_{-0.16}$	$D_A(0.57)$	1372.2	$1368^{+48}_{-46}$
$A_{217}^{\text{CIB}}$	67.2	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8850	$1.888^{+0.038}_{-0.039}$	$F_{\text{AP}}(0.57)$	0.67468	$0.6746^{+0.0041}_{-0.0040}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.02	—	$D_{40}$	1228.0	$1228^{+30}_{-29}$	$f\sigma_8(0.57)$	0.4852	$0.486^{+0.021}_{-0.021}$
$A_{143}^{\text{tSZ}}$	7.11	$5.0^{+3.7}_{-3.8}$	$D_{220}$	5717	$5718^{+80}_{-80}$	$\sigma_8(0.57)$	0.6239	$0.625^{+0.030}_{-0.029}$
$A_{100}^{\text{PS}}$	255	$261^{+50}_{-60}$	$D_{810}$	2535.2	$2535^{+28}_{-28}$	$f_{2000}^{143}$	30.1	$31^{+7}_{-6}$
$A_{143}^{\text{PS}}$	40.1	$45^{+20}_{-20}$	$D_{1420}$	814.5	$814^{+10}_{-10}$	$f_{2000}^{143 \times 217}$	32.69	$33^{+5}_{-5}$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$D_{2000}$	230.02	$229.6^{+4.3}_{-4.5}$	$f_{2000}^{217}$	106.30	$106.7^{+4.5}_{-4.4}$
$A_{217}^{\text{PS}}$	98.1	$97^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9723	$0.973^{+0.016}_{-0.016}$	$\chi_{\text{lowTEB}}^2$	10496.03	$10496.7 (\nu: 3.1)$
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.2470	$0.2476^{+0.0056}_{-0.0057}$	$\chi_{\text{plik}}^2$	764.1	$778.2 (\nu: 16.8)$
$A_{100}^{\text{dustTT}}$	7.42	$7.5^{+3.7}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.2483	$0.2490^{+0.0056}_{-0.0057}$	$\chi_{\text{H070p6}}^2$	0.40	$0.48 (\nu: 0.1)$
$A_{143}^{\text{dustTT}}$	9.05	$9.0^{+3.6}_{-3.6}$	$10^5 \text{D}/\text{H}$	2.634	$2.65^{+0.13}_{-0.12}$	$\chi_{\text{JLA}}^2$	706.617	$706.67 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.2^{+8.3}_{-8.2}$	$\text{Age}/\text{Gyr}$	13.680	$13.64^{+0.40}_{-0.40}$	$\chi_{6\text{DF}}^2$	0.003	$0.046 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	81.7	$82^{+10}_{-10}$	$z_*$	1090.10	$1090.20^{+0.95}_{-0.91}$	$\chi_{\text{MGS}}^2$	1.54	$1.63 (\nu: 0.2)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	143.68	$143.2^{+4.0}_{-3.9}$	$\chi_{\text{DR11CMass}}^2$	2.43	$2.91 (\nu: 0.2)$
$c_{217}$	0.99592	$0.9960^{+0.0029}_{-0.0029}$	$100\theta_*$	1.04090	$1.0408^{+0.0013}_{-0.0012}$	$\chi_{\text{DR11LOWZ}}^2$	0.37	$0.51 (\nu: 0.1)$
$H_0$	68.49	$68.7^{+2.7}_{-2.6}$	$D_A/\text{Gpc}$	13.803	$13.76^{+0.37}_{-0.36}$	$\chi_{\text{prior}}^2$	2.0	$7.4 (\nu: 6.5)$
$\Omega_\Lambda$	0.6938	$0.694^{+0.015}_{-0.016}$	$z_{\text{drag}}$	1060.05	$1060.2^{+1.6}_{-1.6}$	$\chi_{\text{CMB}}^2$	11260.1	$11274.8 (\nu: 15.0)$
$\Omega_m$	0.3062	$0.306^{+0.016}_{-0.015}$	$r_{\text{drag}}$	146.34	$145.9^{+4.1}_{-4.0}$	$\chi_{\text{BAO}}^2$	4.34	$5.1 (\nu: 0.6)$
$\Omega_m h^2$	0.1436	$0.1445^{+0.0074}_{-0.0071}$	$k_D$	0.14120	$0.1415^{+0.0031}_{-0.0030}$			

Best-fit  $\chi_{\text{eff}}^2 = 11973.47$ ;  $\bar{\chi}_{\text{eff}}^2 = 11994.45$ ;  $R - 1 = 0.01034$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.54 DR11CMass: 2.43 DR11LOWZ: 0.37 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.03 plik\_dx11dr2\_HM\_v18\_TT: 764.08  
Hubble - H070p6: 0.40 SN - JLA December\_2013: 706.62

### 11.36 base\_nnu\_plikHM\_TT\_lowTEB\_BAO\_post\_lensing\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022321	$0.02232^{+0.00043}_{-0.00043}$	$\Omega_m h^3$	0.0973	$0.0980^{+0.0085}_{-0.0077}$	$100\theta_D$	0.16110	$0.1612^{+0.0011}_{-0.0010}$
$\Omega_c h^2$	0.1195	$0.1200^{+0.0072}_{-0.0065}$	$\sigma_8$	0.8191	$0.820^{+0.025}_{-0.025}$	$z_{\text{eq}}$	3358	$3355^{+57}_{-56}$
$100\theta_{\text{MC}}$	1.04094	$1.0409^{+0.0010}_{-0.0010}$	$\sigma_8 \Omega_m^{0.5}$	0.4528	$0.453^{+0.014}_{-0.014}$	$k_{\text{eq}}$	0.010298	$0.01031^{+0.00028}_{-0.00025}$
$\tau$	0.0674	$0.067^{+0.025}_{-0.026}$	$\sigma_8 \Omega_m^{0.25}$	0.6090	$0.609^{+0.017}_{-0.017}$	$100\theta_{\text{eq}}$	0.8211	$0.822^{+0.011}_{-0.011}$
$N_{\text{eff}}$	3.115	$3.15^{+0.41}_{-0.40}$	$\sigma_8/h^{0.5}$	0.9912	$0.991^{+0.022}_{-0.022}$	$100\theta_{\text{s,eq}}$	0.4535	$0.4538^{+0.0054}_{-0.0055}$
$\ln(10^{10} A_s)$	3.0678	$3.068^{+0.049}_{-0.049}$	$\langle d^2 \rangle^{1/2}$	2.445	$2.445^{+0.052}_{-0.051}$	$r_{\text{drag}}/D_V(0.57)$	0.07191	$0.07194^{+0.00084}_{-0.00083}$
$n_s$	0.9710	$0.971^{+0.015}_{-0.016}$	$z_{\text{re}}$	8.98	$8.9^{+2.3}_{-2.6}$	$H(0.57)$	93.57	$93.8^{+2.9}_{-2.7}$
$y_{\text{cal}}$	1.00008	$1.0001^{+0.0049}_{-0.0049}$	$10^9 A_s$	2.149	$2.15^{+0.11}_{-0.10}$	$D_A(0.57)$	1376.6	$1373^{+47}_{-47}$
$A_{217}^{\text{CIB}}$	67.6	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8783	$1.881^{+0.037}_{-0.037}$	$F_{\text{AP}}(0.57)$	0.67451	$0.6744^{+0.0039}_{-0.0039}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1220.9	$1222^{+28}_{-27}$	$f\sigma_8(0.57)$	0.4747	$0.475^{+0.013}_{-0.013}$
$A_{143}^{\text{tSZ}}$	7.22	$4.9^{+3.8}_{-3.8}$	$D_{220}$	5713	$5716^{+79}_{-81}$	$\sigma_8(0.57)$	0.6108	$0.612^{+0.021}_{-0.021}$
$A_{100}^{\text{PS}}$	254	$262^{+50}_{-60}$	$D_{810}$	2533.4	$2533^{+28}_{-27}$	$f_{2000}^{143}$	30.3	$31^{+6}_{-6}$
$A_{143}^{\text{PS}}$	39.9	$45^{+20}_{-20}$	$D_{1420}$	814.7	$814^{+10}_{-10}$	$f_{2000}^{143 \times 217}$	32.88	$33^{+5}_{-5}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{2000}$	229.91	$229.4^{+4.1}_{-4.5}$	$f_{2000}^{217}$	106.38	$106.9^{+4.6}_{-4.4}$
$A_{217}^{\text{PS}}$	97.5	$96^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9710	$0.971^{+0.015}_{-0.016}$	$\chi_{\text{lensing}}^2$	9.31	10.1 ( $\nu$ : 1.2)
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.2463	$0.2467^{+0.0056}_{-0.0055}$	$\chi_{\text{lowTEB}}^2$	10494.51	10495.0 ( $\nu$ : 0.9)
$A_{100}^{\text{dustTT}}$	7.47	$7.5^{+3.7}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.2476	$0.2481^{+0.0056}_{-0.0055}$	$\chi_{\text{plik}}^2$	766.5	780.0 ( $\nu$ : 15.3)
$A_{143}^{\text{dustTT}}$	9.13	$9.1^{+3.5}_{-3.5}$	$10^5 \text{D}/\text{H}$	2.624	$2.64^{+0.13}_{-0.12}$	$\chi_{\text{H070p6}}^2$	0.48	0.57 ( $\nu$ : 0.2)
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.4^{+8.5}_{-8.4}$	$\text{Age}/\text{Gyr}$	13.729	$13.70^{+0.39}_{-0.39}$	$\chi_{\text{JLA}}^2$	706.604	706.65 ( $\nu$ : 0.0)
$A_{217}^{\text{dustTT}}$	82.1	$82^{+20}_{-10}$	$z_*$	1090.01	$1090.09^{+0.94}_{-0.89}$	$\chi_{6\text{DF}}^2$	0.001	0.043 ( $\nu$ : 0.0)
$c_{100}$	0.99789	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.25	$144.0^{+3.7}_{-3.9}$	$\chi_{\text{MGS}}^2$	1.61	1.73 ( $\nu$ : 0.2)
$c_{217}$	0.99599	$0.9961^{+0.0028}_{-0.0028}$	$100\theta_*$	1.04108	$1.0410^{+0.0012}_{-0.0012}$	$\chi_{\text{DR11CMass}}^2$	2.44	2.93 ( $\nu$ : 0.3)
$H_0$	68.29	$68.5^{+2.8}_{-2.6}$	$D_A/\text{Gpc}$	13.856	$13.83^{+0.35}_{-0.36}$	$\chi_{\text{DR11LOWZ}}^2$	0.32	0.43 ( $\nu$ : 0.1)
$\Omega_\Lambda$	0.6945	$0.695^{+0.015}_{-0.015}$	$z_{\text{drag}}$	1059.86	$1059.9^{+1.6}_{-1.5}$	$\chi_{\text{prior}}^2$	2.1	7.4 ( $\nu$ : 6.5)
$\Omega_m$	0.3055	$0.305^{+0.015}_{-0.015}$	$r_{\text{drag}}$	146.93	$146.7^{+3.9}_{-4.0}$	$\chi_{\text{CMB}}^2$	11270.4	11285.1 ( $\nu$ : 15.1)
$\Omega_m h^2$	0.1425	$0.1430^{+0.0073}_{-0.0067}$	$k_D$	0.14074	$0.1409^{+0.0030}_{-0.0028}$	$\chi_{\text{BAO}}^2$	4.37	5.1 ( $\nu$ : 0.6)

Best-fit  $\chi_{\text{eff}}^2 = 11983.97$ ;  $\bar{\chi}_{\text{eff}}^2 = 12004.83$ ;  $R - 1 = 0.02766$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMass: 2.44 DR11LOWZ: 0.32 CMB - smica\_g30\_ftl\_full\_pp: 9.31 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.51 plik\_dx11dr2\_HM\_v18\_TT: 766.54 Hubble - H070p6: 0.48 SN - JLA December\_2013: 706.60

### 11.37 base\_nnu\_plikHM\_TT\_lowTEB\_BAO\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022267	$0.02226^{+0.00047}_{-0.00047}$	$\Omega_m h^3$	0.0958	$0.0967^{+0.0090}_{-0.0084}$	$100\theta_D$	0.16095	$0.1611^{+0.0012}_{-0.0011}$
$\Omega_c h^2$	0.1184	$0.1192^{+0.0075}_{-0.0072}$	$\sigma_8$	0.8157	$0.817^{+0.027}_{-0.027}$	$z_{\text{eq}}$	3365	$3364^{+60}_{-60}$
$100\theta_{\text{MC}}$	1.04106	$1.0409^{+0.0011}_{-0.0010}$	$\sigma_8 \Omega_m^{0.5}$	0.4523	$0.453^{+0.014}_{-0.013}$	$k_{\text{eq}}$	0.010265	$0.01029^{+0.00029}_{-0.00027}$
$\tau$	0.0671	$0.066^{+0.026}_{-0.026}$	$\sigma_8 \Omega_m^{0.25}$	0.6074	$0.608^{+0.018}_{-0.017}$	$100\theta_{\text{eq}}$	0.8198	$0.820^{+0.012}_{-0.012}$
$N_{\text{eff}}$	3.038	$3.08^{+0.45}_{-0.44}$	$\sigma_8/h^{0.5}$	0.9907	$0.990^{+0.022}_{-0.022}$	$100\theta_{\text{s,eq}}$	0.4529	$0.4530^{+0.0059}_{-0.0058}$
$\ln(10^{10} A_s)$	3.064	$3.063^{+0.051}_{-0.051}$	$\langle d^2 \rangle^{1/2}$	2.449	$2.447^{+0.053}_{-0.053}$	$r_{\text{drag}}/D_V(0.57)$	0.07182	$0.07181^{+0.00092}_{-0.00090}$
$n_s$	0.9680	$0.968^{+0.017}_{-0.017}$	$z_{\text{re}}$	8.93	$8.8^{+2.3}_{-2.6}$	$H(0.57)$	93.02	$93.3^{+3.2}_{-3.1}$
$y_{\text{cal}}$	1.00016	$1.0001^{+0.0048}_{-0.0048}$	$10^9 A_s$	2.142	$2.14^{+0.11}_{-0.11}$	$D_A(0.57)$	1386	$1382^{+53}_{-52}$
$A_{217}^{\text{CIB}}$	67.6	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8732	$1.876^{+0.042}_{-0.040}$	$F_{\text{AP}}(0.57)$	0.67502	$0.6750^{+0.0043}_{-0.0042}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1225.0	$1225^{+30}_{-28}$	$f\sigma_8(0.57)$	0.4732	$0.474^{+0.014}_{-0.014}$
$A_{143}^{\text{tSZ}}$	7.26	$5.0^{+3.8}_{-3.8}$	$D_{220}$	5716	$5716^{+79}_{-81}$	$\sigma_8(0.57)$	0.6078	$0.608^{+0.023}_{-0.022}$
$A_{100}^{\text{PS}}$	253	$261^{+50}_{-50}$	$D_{810}$	2532.5	$2532^{+28}_{-27}$	$f_{2000}^{143}$	29.9	$31^{+6}_{-6}$
$A_{143}^{\text{PS}}$	38.8	$45^{+20}_{-20}$	$D_{1420}$	815.1	$814^{+10}_{-10}$	$f_{2000}^{143 \times 217}$	32.55	$33^{+5}_{-5}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{2000}$	230.29	$229.7^{+4.3}_{-4.6}$	$f_{2000}^{217}$	106.09	$106.6^{+4.7}_{-4.5}$
$A_{217}^{\text{PS}}$	96.8	$96^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9680	$0.968^{+0.017}_{-0.017}$	$\chi_{\text{lensing}}^2$	9.25	10.0 ( $\nu$ : 1.2)
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.2452	$0.2458^{+0.0060}_{-0.0061}$	$\chi_{\text{lowTEB}}^2$	10494.91	10495.4 ( $\nu$ : 1.0)
$A_{100}^{\text{dustTT}}$	7.51	$7.4^{+3.6}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.2466	$0.2471^{+0.0060}_{-0.0062}$	$\chi_{\text{plik}}^2$	766.1	779.8 ( $\nu$ : 15.3)
$A_{143}^{\text{dustTT}}$	9.13	$9.1^{+3.5}_{-3.5}$	$10^5 \text{D}/\text{H}$	2.608	$2.63^{+0.13}_{-0.13}$	$\chi_{6\text{DF}}^2$	0.006	0.055 ( $\nu$ : 0.0)
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.3^{+8.5}_{-8.3}$	$\text{Age}/\text{Gyr}$	13.805	$13.77^{+0.44}_{-0.43}$	$\chi_{\text{MGS}}^2$	1.47	1.55 ( $\nu$ : 0.2)
$A_{217}^{\text{dustTT}}$	81.9	$82^{+20}_{-10}$	$z_*$	1089.90	$1090.03^{+0.96}_{-0.90}$	$\chi_{\text{DR11CMAS}}^2$	2.40	2.93 ( $\nu$ : 0.3)
$c_{100}$	0.99790	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.96	$144.6^{+4.3}_{-4.1}$	$\chi_{\text{DR11LOWZ}}^2$	0.42	0.59 ( $\nu$ : 0.2)
$c_{217}$	0.99599	$0.9960^{+0.0029}_{-0.0028}$	$100\theta_*$	1.04126	$1.0411^{+0.0013}_{-0.0013}$	$\chi_{\text{prior}}^2$	2.2	7.3 ( $\nu$ : 6.3)
$H_0$	67.79	$68.0^{+2.9}_{-3.0}$	$D_A/\text{Gpc}$	13.922	$13.89^{+0.40}_{-0.41}$	$\chi_{\text{CMB}}^2$	11270.3	11285.2 ( $\nu$ : 15.3)
$\Omega_\Lambda$	0.6925	$0.692^{+0.017}_{-0.017}$	$z_{\text{drag}}$	1059.59	$1059.6^{+1.7}_{-1.7}$	$\chi_{\text{BAO}}^2$	4.30	5.1 ( $\nu$ : 0.6)
$\Omega_m$	0.3075	$0.308^{+0.017}_{-0.017}$	$r_{\text{drag}}$	147.67	$147.3^{+4.5}_{-4.3}$			
$\Omega_m h^2$	0.1413	$0.1421^{+0.0076}_{-0.0074}$	$k_D$	0.14021	$0.1405^{+0.0032}_{-0.0032}$			

Best-fit  $\chi_{\text{eff}}^2 = 11276.73$ ;  $\bar{\chi}_{\text{eff}}^2 = 11297.63$ ;  $R - 1 = 0.02506$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMAS: 2.40 DR11LOWZ: 0.42 CMB - smica\_g30\_ftl\_full\_pp: 9.25 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.91 plik\_dx11dr2\_HM\_v18\_TT: 766.09

### 11.38 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022261	$0.02229^{+0.00038}_{-0.00038}$	$A_{143}^{\text{dust}TE}$	0.154	$0.15^{+0.11}_{-0.10}$	$r_*$	145.17	$144.8^{+3.6}_{-3.4}$
$\Omega_c h^2$	0.1184	$0.1192^{+0.0060}_{-0.0059}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04116	$1.0411^{+0.0011}_{-0.0010}$
$100\theta_{\text{MC}}$	1.04093	$1.04087^{+0.00087}_{-0.00083}$	$A_{217}^{\text{dust}TE}$	1.66	$1.67^{+0.51}_{-0.50}$	$D_A/\text{Gpc}$	13.943	$13.91^{+0.33}_{-0.31}$
$\tau$	0.0832	$0.082^{+0.032}_{-0.032}$	$c_{100}$	0.99822	$0.9982^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.51	$1059.7^{+1.4}_{-1.5}$
$N_{\text{eff}}$	2.996	$3.04^{+0.35}_{-0.35}$	$c_{217}$	0.99584	$0.9959^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.88	$147.5^{+3.7}_{-3.5}$
$\ln(10^{10} A_s)$	3.098	$3.098^{+0.067}_{-0.069}$	$H_0$	67.23	$67.5^{+2.4}_{-2.4}$	$k_D$	0.14015	$0.1405^{+0.0026}_{-0.0027}$
$n_s$	0.9651	$0.966^{+0.015}_{-0.015}$	$\Omega_\Lambda$	0.6873	$0.688^{+0.014}_{-0.015}$	$100\theta_D$	0.16077	$0.16086^{+0.00080}_{-0.00081}$
$y_{\text{cal}}$	1.00011	$1.0005^{+0.0050}_{-0.0050}$	$\Omega_m$	0.3127	$0.312^{+0.015}_{-0.014}$	$z_{\text{eq}}$	3385	$3383^{+53}_{-51}$
$A_{217}^{\text{CIB}}$	64.1	$64^{+10}_{-10}$	$\Omega_m h^2$	0.1413	$0.1421^{+0.0062}_{-0.0062}$	$k_{\text{eq}}$	0.010297	$0.01032^{+0.00023}_{-0.00023}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.37	—	$\Omega_m h^3$	0.0950	$0.0959^{+0.0072}_{-0.0070}$	$100\theta_{\text{eq}}$	0.8160	$0.8165^{+0.0099}_{-0.010}$
$A_{143}^{\text{tSZ}}$	7.04	$5.4^{+3.6}_{-3.8}$	$\sigma_8$	0.8298	$0.831^{+0.034}_{-0.034}$	$100\theta_{\text{s,eq}}$	0.4509	$0.4511^{+0.0050}_{-0.0051}$
$A_{100}^{\text{PS}}$	250	$259^{+60}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4640	$0.464^{+0.018}_{-0.018}$	$r_{\text{drag}}/D_V(0.57)$	0.07152	$0.07155^{+0.00077}_{-0.00076}$
$A_{143}^{\text{PS}}$	42.7	$43^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6205	$0.621^{+0.023}_{-0.024}$	$H(0.57)$	92.62	$92.9^{+2.6}_{-2.5}$
$A_{143 \times 217}^{\text{PS}}$	42.9	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0120	$1.012^{+0.033}_{-0.033}$	$D_A(0.57)$	1394.3	$1390^{+44}_{-43}$
$A_{217}^{\text{PS}}$	101.8	$98^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.505	$2.504^{+0.073}_{-0.076}$	$F_{\text{AP}}(0.57)$	0.67633	$0.6761^{+0.0038}_{-0.0036}$
$A^{\text{kSZ}}$	0.00	$< 7.77$	$z_{\text{re}}$	10.41	$10.3^{+2.9}_{-3.0}$	$f\sigma_8(0.57)$	0.4828	$0.483^{+0.018}_{-0.019}$
$A_{100}^{\text{dust}TT}$	7.43	$7.5^{+3.7}_{-3.7}$	$10^9 A_s$	2.215	$2.22^{+0.15}_{-0.15}$	$\sigma_8(0.57)$	0.6170	$0.618^{+0.027}_{-0.026}$
$A_{143}^{\text{dust}TT}$	8.96	$8.9^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8753	$1.879^{+0.034}_{-0.035}$	$f_{2000}^{143}$	28.2	$29^{+6}_{-6}$
$A_{143 \times 217}^{\text{dust}TT}$	17.8	$17.0^{+8.1}_{-8.1}$	$D_{40}$	1238.8	$1240^{+28}_{-27}$	$f_{2000}^{143 \times 217}$	31.51	$32^{+4}_{-4}$
$A_{217}^{\text{dust}TT}$	82.1	$82^{+10}_{-10}$	$D_{220}$	5725	$5731^{+78}_{-77}$	$f_{2000}^{217}$	105.03	$105.6^{+3.9}_{-3.9}$
$A_{100}^{\text{dust}EE}$	0.0816	$0.081^{+0.011}_{-0.011}$	$D_{810}$	2534.1	$2535^{+28}_{-27}$	$\chi_{\text{lowTEB}}^2$	10497.26	$10497.8 (\nu: 2.8)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0489	$0.0490^{+0.0097}_{-0.0097}$	$D_{1420}$	815.5	$815.1^{+9.5}_{-9.5}$	$\chi_{\text{plik}}^2$	2431.5	$2450.9 (\nu: 23.7)$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.100^{+0.064}_{-0.063}$	$D_{2000}$	231.02	$230.7^{+3.6}_{-3.6}$	$\chi_{6\text{DF}}^2$	0.047	$0.075 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1003	$0.100^{+0.013}_{-0.013}$	$n_{\text{s},0.002}$	0.9651	$0.966^{+0.015}_{-0.015}$	$\chi_{\text{MGS}}^2$	1.10	$1.21 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.224^{+0.091}_{-0.092}$	$Y_{\text{P}}$	0.24466	$0.2452^{+0.0049}_{-0.0050}$	$\chi_{\text{DR11CMass}}^2$	2.59	$2.94 (\nu: 0.3)$
$A_{217}^{\text{dust}EE}$	0.651	$0.65^{+0.25}_{-0.25}$	$Y_{\text{P}}^{\text{BBN}}$	0.24599	$0.2466^{+0.0049}_{-0.0050}$	$\chi_{\text{DR11LOWZ}}^2$	0.82	$0.89 (\nu: 0.2)$
$A_{100}^{\text{dust}TE}$	0.140	$0.140^{+0.074}_{-0.074}$	$10^5 D/H$	2.594	$2.604^{+0.092}_{-0.091}$	$\chi_{\text{prior}}^2$	6.8	$19.3 (\nu: 14.9)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.058}_{-0.057}$	Age/Gyr	13.854	$13.81^{+0.37}_{-0.35}$	$\chi_{\text{CMB}}^2$	12928.7	$12948.7 (\nu: 22.1)$
$A_{100 \times 217}^{\text{dust}TE}$	0.307	$0.30^{+0.16}_{-0.17}$	$z_*$	1089.87	$1089.94^{+0.70}_{-0.69}$	$\chi_{\text{BAO}}^2$	4.56	$5.1 (\nu: 0.6)$

Best-fit  $\chi_{\text{eff}}^2 = 12940.09$ ;  $\bar{\chi}_{\text{eff}}^2 = 12973.12$ ;  $R - 1 = 0.00881$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.05 MGS: 1.10 DR11CMass: 2.60 DR11LOWZ: 0.82 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10497.26 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.46

### 11.39 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_BAO\_post\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022366	$0.02235^{+0.00037}_{-0.00036}$	$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.852	$13.86^{+0.31}_{-0.29}$
$\Omega_c h^2$	0.1199	$0.1198^{+0.0058}_{-0.0057}$	$A_{217}^{\text{dustTE}}$	1.67	$1.67^{+0.52}_{-0.50}$	$z_{\text{drag}}$	1059.97	$1059.9^{+1.3}_{-1.3}$
$100\theta_{\text{MC}}$	1.04078	$1.04080^{+0.00084}_{-0.00080}$	$c_{100}$	0.99820	$0.9982^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	146.84	$146.9^{+3.5}_{-3.3}$
$\tau$	0.0863	$0.084^{+0.031}_{-0.032}$	$c_{217}$	0.99596	$0.9959^{+0.0029}_{-0.0028}$	$k_D$	0.14090	$0.1408^{+0.0025}_{-0.0025}$
$N_{\text{eff}}$	3.103	$3.10^{+0.34}_{-0.33}$	$H_0$	68.02	$67.9^{+2.2}_{-2.2}$	$100\theta_D$	0.16096	$0.16097^{+0.00077}_{-0.00077}$
$\ln(10^{10} A_s)$	3.108	$3.104^{+0.067}_{-0.068}$	$\Omega_\Lambda$	0.6912	$0.691^{+0.013}_{-0.014}$	$z_{\text{eq}}$	3372.7	$3375^{+50}_{-47}$
$n_s$	0.9693	$0.968^{+0.014}_{-0.014}$	$\Omega_m$	0.3088	$0.309^{+0.014}_{-0.013}$	$k_{\text{eq}}$	0.010334	$0.01033^{+0.00023}_{-0.00023}$
$y_{\text{cal}}$	1.00038	$1.0005^{+0.0050}_{-0.0049}$	$\Omega_m h^2$	0.1429	$0.1428^{+0.0060}_{-0.0059}$	$100\theta_{\text{eq}}$	0.8185	$0.8181^{+0.0092}_{-0.0095}$
$A_{217}^{\text{CIB}}$	66.1	$64^{+10}_{-10}$	$\Omega_m h^3$	0.0972	$0.0971^{+0.0068}_{-0.0066}$	$100\theta_{s,\text{eq}}$	0.45211	$0.4519^{+0.0047}_{-0.0048}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.16	—	$\sigma_8$	0.8364	$0.835^{+0.033}_{-0.033}$	$r_{\text{drag}}/D_V(0.57)$	0.07170	$0.07168^{+0.00072}_{-0.00073}$
$A_{143}^{\text{tSZ}}$	7.18	$5.4^{+3.6}_{-3.7}$	$\sigma_8 \Omega_m^{0.5}$	0.4648	$0.464^{+0.018}_{-0.018}$	$H(0.57)$	93.43	$93.4^{+2.4}_{-2.4}$
$A_{100}^{\text{PS}}$	255	$260^{+50}_{-60}$	$\sigma_8 \Omega_m^{0.25}$	0.6235	$0.623^{+0.024}_{-0.023}$	$D_A(0.57)$	1380.3	$1382^{+40}_{-39}$
$A_{143}^{\text{PS}}$	40.4	$43^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0141	$1.013^{+0.033}_{-0.033}$	$F_{\text{AP}}(0.57)$	0.67534	$0.6755^{+0.0035}_{-0.0034}$
$A_{143 \times 217}^{\text{PS}}$	37.1	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.504	$2.502^{+0.073}_{-0.078}$	$f\sigma_8(0.57)$	0.4856	$0.485^{+0.018}_{-0.018}$
$A_{217}^{\text{PS}}$	98.9	$98^{+20}_{-20}$	$z_{\text{re}}$	10.70	$10.5^{+2.8}_{-3.0}$	$\sigma_8(0.57)$	0.6228	$0.622^{+0.026}_{-0.026}$
$A^{\text{kSZ}}$	0.00	$< 7.85$	$10^9 A_s$	2.237	$2.23^{+0.15}_{-0.15}$	$f_{2000}^{143}$	29.1	$29^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.43	$7.5^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8827	$1.883^{+0.033}_{-0.034}$	$f_{2000}^{143 \times 217}$	32.05	$32^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	8.99	$9.0^{+3.6}_{-3.6}$	$D_{40}$	1235.2	$1237^{+27}_{-27}$	$f_{2000}^{217}$	105.64	$105.8^{+3.8}_{-4.0}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.0^{+8.1}_{-8.2}$	$D_{220}$	5729	$5731^{+78}_{-76}$	$\chi^2_{\text{lowTEB}}$	10496.97	10497.6 ( $\nu$ : 2.9)
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$D_{810}$	2535.9	$2536^{+28}_{-27}$	$\chi^2_{\text{plik}}$	2432.2	2451.4 ( $\nu$ : 23.9)
$A_{100}^{\text{dustEE}}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	815.2	$815.0^{+9.5}_{-9.4}$	$\chi^2_{\text{H070p6}}$	0.60	0.75 ( $\nu$ : 0.2)
$A_{100 \times 143}^{\text{dustEE}}$	0.0493	$0.0491^{+0.0097}_{-0.0097}$	$D_{2000}$	230.59	$230.5^{+3.5}_{-3.6}$	$\chi^2_{\text{JLA}}$	706.676	706.73 ( $\nu$ : 0.0)
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.100^{+0.064}_{-0.065}$	$n_{s,0.002}$	0.9693	$0.968^{+0.014}_{-0.014}$	$\chi^2_{6\text{DF}}$	0.015	0.051 ( $\nu$ : 0.0)
$A_{143}^{\text{dustEE}}$	0.1007	$0.101^{+0.013}_{-0.014}$	$Y_P$	0.24617	$0.2460^{+0.0045}_{-0.0047}$	$\chi^2_{\text{MGS}}$	1.34	1.37 ( $\nu$ : 0.1)
$A_{143 \times 217}^{\text{dustEE}}$	0.225	$0.224^{+0.091}_{-0.093}$	$Y_P^{\text{BBN}}$	0.24750	$0.2474^{+0.0045}_{-0.0047}$	$\chi^2_{\text{DR11CMAS}}$	2.44	2.79 ( $\nu$ : 0.1)
$A_{217}^{\text{dustEE}}$	0.656	$0.65^{+0.26}_{-0.25}$	$10^5 D/H$	2.612	$2.613^{+0.088}_{-0.088}$	$\chi^2_{\text{DR11LOWZ}}$	0.55	0.69 ( $\nu$ : 0.1)
$A_{100}^{\text{dustTE}}$	0.141	$0.140^{+0.074}_{-0.074}$	Age/Gyr	13.742	$13.75^{+0.34}_{-0.33}$	$\chi^2_{\text{prior}}$	6.9	19.4 ( $\nu$ : 15.0)
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.131^{+0.057}_{-0.057}$	$z_*$	1089.97	$1089.98^{+0.69}_{-0.67}$	$\chi^2_{\text{CMB}}$	12929.2	12949.0 ( $\nu$ : 22.1)
$A_{100 \times 217}^{\text{dustTE}}$	0.302	$0.30^{+0.17}_{-0.17}$	$r_*$	144.18	$144.3^{+3.3}_{-3.2}$	$\chi^2_{\text{BAO}}$	4.34	4.91 ( $\nu$ : 0.3)
$A_{143}^{\text{dustTE}}$	0.154	$0.15^{+0.11}_{-0.10}$	$100\theta_*$	1.04093	$1.0410^{+0.0010}_{-0.00098}$			

Best-fit  $\chi^2_{\text{eff}} = 13647.70$ ;  $\bar{\chi}^2_{\text{eff}} = 13680.72$ ;  $R - 1 = 0.01333$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.34 DR11CMAS: 2.44 DR11LOWZ: 0.55 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.97 plik\_dx11dr2\_HM\_v18\_TTTEEE:



## 11.40 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_BAO\_post\_lensing\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022286	$0.02229^{+0.00037}_{-0.00036}$	$A_{143 \times 217}^{\text{dust}TE}$	0.338	$0.33^{+0.16}_{-0.15}$	$D_A/\text{Gpc}$	13.937	$13.92^{+0.31}_{-0.30}$
$\Omega_c h^2$	0.1182	$0.1187^{+0.0055}_{-0.0053}$	$A_{217}^{\text{dust}TE}$	1.66	$1.67^{+0.50}_{-0.53}$	$z_{\text{drag}}$	1059.59	$1059.6^{+1.3}_{-1.3}$
$100\theta_{\text{MC}}$	1.04094	$1.04095^{+0.00080}_{-0.00081}$	$c_{100}$	0.99817	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.81	$147.6^{+3.4}_{-3.4}$
$\tau$	0.0667	$0.066^{+0.024}_{-0.023}$	$c_{217}$	0.99606	$0.9960^{+0.0028}_{-0.0029}$	$k_D$	0.14016	$0.1403^{+0.0025}_{-0.0025}$
$N_{\text{eff}}$	3.016	$3.04^{+0.33}_{-0.33}$	$H_0$	67.57	$67.7^{+2.4}_{-2.2}$	$100\theta_D$	0.16082	$0.16089^{+0.00075}_{-0.00076}$
$\ln(10^{10} A_s)$	3.0632	$3.063^{+0.047}_{-0.046}$	$\Omega_\Lambda$	0.6909	$0.691^{+0.013}_{-0.014}$	$z_{\text{eq}}$	3371	$3372^{+49}_{-51}$
$n_s$	0.9661	$0.966^{+0.014}_{-0.014}$	$\Omega_m$	0.3091	$0.309^{+0.014}_{-0.013}$	$k_{\text{eq}}$	0.010268	$0.01029^{+0.00021}_{-0.00022}$
$y_{\text{cal}}$	0.9999	$1.0001^{+0.0052}_{-0.0050}$	$\Omega_m h^2$	0.1411	$0.1416^{+0.0058}_{-0.0056}$	$100\theta_{\text{eq}}$	0.8186	$0.8186^{+0.0092}_{-0.0095}$
$A_{217}^{\text{CIB}}$	67.2	$64^{+10}_{-10}$	$\Omega_m h^3$	0.0954	$0.0959^{+0.0068}_{-0.0064}$	$100\theta_{s,\text{eq}}$	0.45223	$0.4522^{+0.0047}_{-0.0048}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.06	—	$\sigma_8$	0.8145	$0.815^{+0.024}_{-0.023}$	$r_{\text{drag}}/D_V(0.57)$	0.07171	$0.07171^{+0.00071}_{-0.00072}$
$A_{143}^{\text{tSZ}}$	7.26	$5.3^{+3.6}_{-3.7}$	$\sigma_8 \Omega_m^{0.5}$	0.4528	$0.453^{+0.012}_{-0.013}$	$H(0.57)$	92.84	$93.0^{+2.5}_{-2.4}$
$A_{100}^{\text{PS}}$	256	$260^{+50}_{-60}$	$\sigma_8 \Omega_m^{0.25}$	0.6073	$0.608^{+0.015}_{-0.015}$	$D_A(0.57)$	1389.3	$1387^{+41}_{-42}$
$A_{143}^{\text{PS}}$	38.9	$43^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9908	$0.991^{+0.020}_{-0.021}$	$F_{\text{AP}}(0.57)$	0.67543	$0.6754^{+0.0036}_{-0.0034}$
$A_{143 \times 217}^{\text{PS}}$	33.8	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4542	$2.454^{+0.050}_{-0.048}$	$f\sigma_8(0.57)$	0.4729	$0.473^{+0.012}_{-0.012}$
$A_{217}^{\text{PS}}$	96.9	$97^{+20}_{-20}$	$z_{\text{re}}$	8.89	$8.8^{+2.2}_{-2.3}$	$\sigma_8(0.57)$	0.6065	$0.607^{+0.019}_{-0.019}$
$A^{\text{kSZ}}$	0.0	—	$10^9 A_s$	2.140	$2.14^{+0.10}_{-0.097}$	$f_{2000}^{143}$	29.4	$30^{+6}_{-6}$
$A_{100}^{\text{dust}TT}$	7.49	$7.5^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8724	$1.875^{+0.033}_{-0.033}$	$f_{2000}^{143 \times 217}$	32.24	$32^{+4}_{-4}$
$A_{143}^{\text{dust}TT}$	9.11	$9.1^{+3.5}_{-3.6}$	$D_{40}$	1229.1	$1230^{+26}_{-25}$	$f_{2000}^{217}$	105.74	$106.0^{+3.9}_{-3.9}$
$A_{143 \times 217}^{\text{dust}TT}$	17.7	$17.2^{+8.0}_{-8.3}$	$D_{220}$	5724	$5726^{+80}_{-76}$	$\chi^2_{\text{lensing}}$	9.62	$10.3 (\nu: 1.6)$
$A_{217}^{\text{dust}TT}$	82.0	$82^{+10}_{-10}$	$D_{810}$	2532.0	$2533^{+28}_{-28}$	$\chi^2_{\text{lowTEB}}$	10495.32	$10495.7 (\nu: 0.9)$
$A_{100}^{\text{dust}EE}$	0.0816	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	814.9	$814.9^{+9.6}_{-9.5}$	$\chi^2_{\text{plik}}$	2435.1	$2454.1 (\nu: 22.4)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0491	$0.0493^{+0.0095}_{-0.0096}$	$D_{2000}$	230.34	$230.2^{+3.5}_{-3.6}$	$\chi^2_{\text{H070p6}}$	0.83	$0.89 (\nu: 0.2)$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.0999^{+0.062}_{-0.066}$	$n_{s,0.002}$	0.9661	$0.966^{+0.014}_{-0.014}$	$\chi^2_{\text{JLA}}$	706.684	$706.73 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1002	$0.101^{+0.014}_{-0.014}$	$Y_P$	0.24494	$0.2452^{+0.0046}_{-0.0046}$	$\chi^2_{6\text{DF}}$	0.015	$0.046 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.224^{+0.091}_{-0.092}$	$Y_P^{\text{BBN}}$	0.24627	$0.2466^{+0.0046}_{-0.0046}$	$\chi^2_{\text{MGS}}$	1.34	$1.41 (\nu: 0.1)$
$A_{217}^{\text{dust}EE}$	0.650	$0.65^{+0.26}_{-0.26}$	$10^5 D/H$	2.597	$2.604^{+0.083}_{-0.087}$	$\chi^2_{\text{DR11CMass}}$	2.42	$2.76 (\nu: 0.1)$
$A_{100}^{\text{dust}TE}$	0.141	$0.140^{+0.073}_{-0.076}$	$\text{Age}/\text{Gyr}$	13.829	$13.81^{+0.34}_{-0.33}$	$\chi^2_{\text{DR11LOWZ}}$	0.54	$0.65 (\nu: 0.1)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.056}_{-0.055}$	$z_*$	1089.84	$1089.90^{+0.63}_{-0.65}$	$\chi^2_{\text{prior}}$	7.1	$19.6 (\nu: 16.3)$
$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.16}_{-0.17}$	$r_*$	145.11	$144.9^{+3.3}_{-3.2}$	$\chi^2_{\text{CMB}}$	12940.0	$12960.1 (\nu: 21.1)$
$A_{143}^{\text{dust}TE}$	0.155	$0.15^{+0.11}_{-0.10}$	$100\theta_*$	1.04116	$1.04115^{+0.00099}_{-0.0010}$	$\chi^2_{\text{BAO}}$	4.32	$4.86 (\nu: 0.3)$

Best-fit  $\chi^2_{\text{eff}} = 13659.02$ ;  $\bar{\chi}^2_{\text{eff}} = 13692.20$ ;  $R - 1 = 0.03612$   
 $\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.34 DR11CMASS: 2.42 DR11LOWZ: 0.54 CMB - smica\_g30\_ftl\_full\_pp: 9.62 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.32 plik\_dx11dr2\_HM\_v18\_TT  
2435.11 Hubble - H070p6: 0.83 SN - JLA December\_2013: 706.68

# 11.41 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_BAO\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022240	$0.02222^{+0.00037}_{-0.00040}$	$A_{143 \times 217}^{\text{dust}TE}$	0.335	$0.33^{+0.16}_{-0.15}$	$D_A/\text{Gpc}$	13.973	$13.97^{+0.31}_{-0.31}$
$\Omega_c h^2$	0.1177	$0.1179^{+0.0057}_{-0.0056}$	$A_{217}^{\text{dust}TE}$	1.66	$1.67^{+0.49}_{-0.52}$	$z_{\text{drag}}$	1059.40	$1059.4^{+1.4}_{-1.4}$
$100\theta_{\text{MC}}$	1.04104	$1.04103^{+0.00080}_{-0.00082}$	$c_{100}$	0.99814	$0.9981^{+0.0016}_{-0.0015}$	$r_{\text{drag}}$	148.22	$148.2^{+3.5}_{-3.5}$
$\tau$	0.0652	$0.064^{+0.024}_{-0.023}$	$c_{217}$	0.99599	$0.9960^{+0.0029}_{-0.0028}$	$k_D$	0.13987	$0.1399^{+0.0026}_{-0.0025}$
$N_{\text{eff}}$	2.972	$2.98^{+0.35}_{-0.34}$	$H_0$	67.23	$67.2^{+2.4}_{-2.4}$	$100\theta_D$	0.16075	$0.16077^{+0.00076}_{-0.00078}$
$\ln(10^{10} A_s)$	3.0592	$3.057^{+0.049}_{-0.049}$	$\Omega_\Lambda$	0.6889	$0.688^{+0.014}_{-0.015}$	$z_{\text{eq}}$	3378	$3381^{+54}_{-51}$
$n_s$	0.9644	$0.964^{+0.015}_{-0.015}$	$\Omega_m$	0.3111	$0.312^{+0.015}_{-0.014}$	$k_{\text{eq}}$	0.010258	$0.01027^{+0.00022}_{-0.00021}$
$y_{\text{cal}}$	1.0001	$1.0001^{+0.0052}_{-0.0051}$	$\Omega_m h^2$	0.1406	$0.1408^{+0.0059}_{-0.0058}$	$100\theta_{\text{eq}}$	0.8173	$0.8168^{+0.0098}_{-0.010}$
$A_{217}^{\text{CIB}}$	66.8	$64^{+10}_{-10}$	$\Omega_m h^3$	0.0945	$0.0946^{+0.0072}_{-0.0066}$	$100\theta_{s,\text{eq}}$	0.4516	$0.4513^{+0.0050}_{-0.0051}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.07	—	$\sigma_8$	0.8121	$0.812^{+0.025}_{-0.023}$	$r_{\text{drag}}/D_V(0.57)$	0.07162	$0.07158^{+0.00076}_{-0.00076}$
$A_{143}^{\text{tSZ}}$	7.30	$5.3^{+3.6}_{-3.6}$	$\sigma_8 \Omega_m^{0.5}$	0.4530	$0.453^{+0.012}_{-0.012}$	$H(0.57)$	92.50	$92.5^{+2.6}_{-2.5}$
$A_{100}^{\text{PS}}$	255	$259^{+50}_{-60}$	$\sigma_8 \Omega_m^{0.25}$	0.6065	$0.607^{+0.016}_{-0.015}$	$D_A(0.57)$	1395.3	$1396^{+44}_{-43}$
$A_{143}^{\text{PS}}$	38.3	$43^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9905	$0.991^{+0.020}_{-0.020}$	$F_{\text{AP}}(0.57)$	0.67592	$0.6761^{+0.0038}_{-0.0036}$
$A_{143 \times 217}^{\text{PS}}$	33.7	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4555	$2.456^{+0.050}_{-0.048}$	$f\sigma_8(0.57)$	0.4721	$0.472^{+0.013}_{-0.012}$
$A_{217}^{\text{PS}}$	97.4	$96^{+20}_{-20}$	$z_{\text{re}}$	8.74	$8.6^{+2.2}_{-2.3}$	$\sigma_8(0.57)$	0.6043	$0.604^{+0.020}_{-0.019}$
$A^{\text{kSZ}}$	0.0	—	$10^9 A_s$	2.131	$2.13^{+0.11}_{-0.10}$	$f_{2000}^{143}$	29.1	$30^{+6}_{-6}$
$A_{100}^{\text{dust}TT}$	7.48	$7.5^{+3.7}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8705	$1.871^{+0.034}_{-0.034}$	$f_{2000}^{143 \times 217}$	31.97	$32^{+4}_{-4}$
$A_{143}^{\text{dust}TT}$	9.10	$9.1^{+3.5}_{-3.6}$	$D_{40}$	1231.0	$1233^{+27}_{-26}$	$f_{2000}^{217}$	105.59	$105.8^{+4.0}_{-4.0}$
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.2^{+8.1}_{-8.3}$	$D_{220}$	5724	$5725^{+78}_{-78}$	$\chi^2_{\text{lensing}}$	9.55	$10.2 (\nu: 1.5)$
$A_{217}^{\text{dust}TT}$	81.9	$82^{+10}_{-10}$	$D_{810}$	2532.6	$2532^{+28}_{-28}$	$\chi^2_{\text{lowTEB}}$	10495.48	$10496.0 (\nu: 1.0)$
$A_{100}^{\text{dust}EE}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	815.5	$815.0^{+9.5}_{-9.6}$	$\chi^2_{\text{plik}}$	2434.8	$2453.7 (\nu: 21.9)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0493	$0.0491^{+0.0096}_{-0.0095}$	$D_{2000}$	230.66	$230.5^{+3.6}_{-3.6}$	$\chi^2_{6\text{DF}}$	0.029	$0.071 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.0997	$0.100^{+0.063}_{-0.066}$	$n_{s,0.002}$	0.9644	$0.964^{+0.015}_{-0.015}$	$\chi^2_{\text{MGS}}$	1.22	$1.24 (\nu: 0.1)$
$A_{143}^{\text{dust}EE}$	0.1002	$0.100^{+0.013}_{-0.014}$	$Y_P$	0.24433	$0.2443^{+0.0049}_{-0.0048}$	$\chi^2_{\text{DR11CMass}}$	2.48	$2.89 (\nu: 0.2)$
$A_{143 \times 217}^{\text{dust}EE}$	0.226	$0.225^{+0.091}_{-0.091}$	$Y_P^{\text{BBN}}$	0.24565	$0.2456^{+0.0049}_{-0.0049}$	$\chi^2_{\text{DR11LOWZ}}$	0.67	$0.85 (\nu: 0.2)$
$A_{217}^{\text{dust}EE}$	0.656	$0.65^{+0.26}_{-0.25}$	$10^5 D/H$	2.590	$2.594^{+0.086}_{-0.085}$	$\chi^2_{\text{prior}}$	7.1	$19.5 (\nu: 15.8)$
$A_{100}^{\text{dust}TE}$	0.142	$0.140^{+0.073}_{-0.075}$	$\text{Age}/\text{Gyr}$	13.875	$13.88^{+0.36}_{-0.36}$	$\chi^2_{\text{CMB}}$	12939.8	$12960.0 (\nu: 20.8)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.131^{+0.056}_{-0.054}$	$z_*$	1089.81	$1089.85^{+0.64}_{-0.63}$	$\chi^2_{\text{BAO}}$	4.39	$5.1 (\nu: 0.5)$
$A_{100 \times 217}^{\text{dust}TE}$	0.299	$0.30^{+0.16}_{-0.16}$	$r_*$	145.50	$145.5^{+3.4}_{-3.3}$			
$A_{143}^{\text{dust}TE}$	0.154	$0.153^{+0.10}_{-0.099}$	$100\theta_*$	1.04128	$1.04128^{+0.00099}_{-0.00098}$			

Best-fit  $\chi^2_{\text{eff}} = 12951.35$ ;  $\bar{\chi}^2_{\text{eff}} = 12984.50$ ;  $R - 1 = 0.02938$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.03 MGS: 1.22 DR11CMass: 2.48 DR11LOWZ: 0.67 CMB - smica\_g30\_ftl\_full\_pp: 9.55 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.48 plik\_dx11dr2\_HM\_v18\_TTT

## 11.42 base\_nnu\_CamSpecHM\_TTTEEE\_lowTEB\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02229^{+0.00037}_{-0.00036} \quad (-0.0\sigma)$	$H_0$	$66.8^{+2.5}_{-2.4} \quad (-0.6\sigma)$	$k_D$	$0.1395^{+0.0028}_{-0.0028} \quad (-0.7\sigma)$
$\Omega_c h^2$	$0.1165^{+0.0064}_{-0.0062} \quad (-0.9\sigma)$	$\Omega_\Lambda$	$0.688^{+0.014}_{-0.015} \quad (-0.1\sigma)$	$100\theta_D$	$0.16041^{+0.00090}_{-0.00092} \quad (-1.1\sigma)$
$100\theta_{MC}$	$1.04116^{+0.00092}_{-0.00087} \quad (+0.7\sigma)$	$\Omega_m$	$0.312^{+0.015}_{-0.014} \quad (+0.1\sigma)$	$z_{eq}$	$3386^{+54}_{-52} \quad (+0.1\sigma)$
$\tau$	$0.078^{+0.032}_{-0.032} \quad (-0.3\sigma)$	$\Omega_m h^2$	$0.1394^{+0.0065}_{-0.0064} \quad (-0.9\sigma)$	$100\theta_{eq}$	$0.816^{+0.010}_{-0.010} \quad (-0.1\sigma)$
$N_{eff}$	$2.89^{+0.38}_{-0.37} \quad (-0.8\sigma)$	$\Omega_m h^3$	$0.0932^{+0.0075}_{-0.0072} \quad (-0.8\sigma)$	$r_{drag}/D_V(0.57)$	$0.07156^{+0.00077}_{-0.00076} \quad (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.080^{+0.066}_{-0.066} \quad (-0.5\sigma)$	$\sigma_8$	$0.819^{+0.033}_{-0.032} \quad (-0.7\sigma)$	$H(0.57)$	$92.0^{+2.7}_{-2.6} \quad (-0.7\sigma)$
$n_s$	$0.964^{+0.015}_{-0.015} \quad (-0.3\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.018}_{-0.017} \quad (-0.7\sigma)$	$D_A(0.57)$	$1404^{+46}_{-45} \quad (+0.6\sigma)$
$y_{cal}$	$1.0003^{+0.0049}_{-0.0050} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.612^{+0.023}_{-0.023} \quad (-0.8\sigma)$	$F_{AP}(0.57)$	$0.6762^{+0.0038}_{-0.0037} \quad (+0.1\sigma)$
$A_{100}^{PS}$	$239^{+40}_{-50} \quad (-0.7\sigma)$	$\sigma_8/h^{0.5}$	$1.002^{+0.033}_{-0.032} \quad (-0.6\sigma)$	$f\sigma_8(0.57)$	$0.476^{+0.018}_{-0.018} \quad (-0.8\sigma)$
$A_{143}^{PS}$	$36^{+20}_{-20} \quad (-0.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.484^{+0.075}_{-0.076} \quad (-0.5\sigma)$	$\sigma_8(0.57)$	$0.609^{+0.026}_{-0.025} \quad (-0.7\sigma)$
$A_{217}^{PS}$	$100^{+30}_{-30} \quad (+0.2\sigma)$	$z_{re}$	$9.8^{+2.9}_{-3.0} \quad (-0.3\sigma)$	$Y_P^{BBN}$	$0.2442^{+0.0052}_{-0.0053} \quad (-0.9\sigma)$
$A_{217}^{CIB}$	$44^{+10}_{-10} \quad (-2.9\sigma)$	$10^9 A_s$	$2.18^{+0.15}_{-0.14} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$27^{+6}_{-6} \quad (-0.8\sigma)$
$A_{143}^{tSZ}$	$< 7.02 \quad (-0.9\sigma)$	$10^9 A_s e^{-2\tau}$	$1.861^{+0.037}_{-0.037} \quad (-1.0\sigma)$	$f_{2000}^{217}$	$105.0^{+4.3}_{-4.2} \quad (-0.3\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.24}_{-0.23}$	$D_{40}$	$1234^{+27}_{-27} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+5}_{-5} \quad (-0.9\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{220}$	$5713^{+75}_{-76} \quad (-0.4\sigma)$	$\chi_{lowTEB}^2$	$10497.1 \quad (\nu: 2.3) \quad (-0.3\sigma)$
$A^{kSZ}$	—	$D_{810}$	$2528^{+28}_{-27} \quad (-0.5\sigma)$	$\chi_{CamSpec}^2$	$12951.4 \quad (\nu: 19.4)$
$A_{100}^{dust}$	$0.98^{+0.38}_{-0.38}$	$D_{1420}$	$816.2^{+9.8}_{-9.7} \quad (+0.2\sigma)$	$\chi_{6DF}^2$	$0.075 \quad (\nu: 0.0) \quad (+0.0\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$n_{s,0.002}$	$0.964^{+0.015}_{-0.015} \quad (-0.3\sigma)$	$\chi_{MGS}^2$	$1.20 \quad (\nu: 0.1) \quad (-0.0\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$Y_P$	$0.2428^{+0.0052}_{-0.0053} \quad (-1.0\sigma)$	$\chi_{DR11CMass}^2$	$2.92 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$Age/Gyr$	$13.95^{+0.39}_{-0.38} \quad (+0.7\sigma)$	$\chi_{DR11LOWZ}^2$	$0.89 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.54^{+0.75}_{-0.76} \quad (-1.1\sigma)$	$\chi_{prior}^2$	$9.0 \quad (\nu: 6.3) \quad (-1.9\sigma)$
$c_{217}$	$0.9969^{+0.0035}_{-0.0035} \quad (+0.7\sigma)$	$r_*$	$146.2^{+3.8}_{-3.7} \quad (+0.8\sigma)$	$\chi_{CMB}^2$	$23448.5 \quad (\nu: 18.2) \quad (+1580.1\sigma)$
$c_{TE}$	$1.0035^{+0.0090}_{-0.0089}$	$100\theta_*$	$1.0415^{+0.0011}_{-0.0011} \quad (+0.7\sigma)$	$\chi_{BAO}^2$	$5.1 \quad (\nu: 0.5) \quad (-0.0\sigma)$
$c_{EE}$	$0.9993^{+0.0093}_{-0.0090}$	$z_{drag}$	$1059.3^{+1.4}_{-1.4} \quad (-0.5\sigma)$		
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_{drag}$	$149.0^{+4.0}_{-3.8} \quad (+0.8\sigma)$		

$$\bar{\chi}_{eff}^2 = 23462.61; \Delta\bar{\chi}_{eff}^2 = 10489.49; R - 1 = 0.00667$$

### 11.43 base\_nnu\_plikHM\_TT\_lowTEB\_nnup39

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022604	$0.02259^{+0.00047}_{-0.00046}$	$\Omega_m$	0.2953	$0.295^{+0.026}_{-0.024}$	$100\theta_*$	1.04043	$1.04045^{+0.00092}_{-0.00091}$
$\Omega_c h^2$	0.12385	$0.1238^{+0.0046}_{-0.0045}$	$\Omega_m h^2$	0.14710	$0.1470^{+0.0043}_{-0.0042}$	$D_A/\text{Gpc}$	13.591	$13.593^{+0.086}_{-0.088}$
$100\theta_{\text{MC}}$	1.04051	$1.04053^{+0.00094}_{-0.00093}$	$\Omega_m h^3$	0.10381	$0.10378^{+0.00096}_{-0.00098}$	$z_{\text{drag}}$	1061.04	$1061.03^{+0.95}_{-0.90}$
$\tau$	0.0917	$0.090^{+0.039}_{-0.039}$	$\sigma_8$	0.8518	$0.850^{+0.031}_{-0.030}$	$r_{\text{drag}}$	143.95	$143.98^{+0.93}_{-0.94}$
$\ln(10^{10} A_s)$	3.128	$3.123^{+0.075}_{-0.073}$	$\sigma_8 \Omega_m^{0.5}$	0.4629	$0.462^{+0.026}_{-0.026}$	$k_D$	0.14295	$0.1429^{+0.0010}_{-0.0010}$
$n_s$	0.9836	$0.983^{+0.013}_{-0.012}$	$\sigma_8 \Omega_m^{0.25}$	0.6279	$0.626^{+0.026}_{-0.027}$	$100\theta_D$	0.16171	$0.16173^{+0.00053}_{-0.00052}$
$y_{\text{cal}}$	1.00018	$1.0003^{+0.0049}_{-0.0049}$	$\sigma_8/h^{0.5}$	1.0139	$1.011^{+0.039}_{-0.039}$	$z_{\text{eq}}$	3326	$3324^{+98}_{-96}$
$A_{217}^{\text{CIB}}$	68.4	$66^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.480	$2.476^{+0.090}_{-0.092}$	$k_{\text{eq}}$	0.010413	$0.01041^{+0.00031}_{-0.00030}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$z_{\text{re}}$	11.24	$11.0^{+3.4}_{-3.4}$	$100\theta_{\text{eq}}$	0.8279	$0.828^{+0.019}_{-0.019}$
$A_{143}^{\text{tSZ}}$	6.98	$4.8^{+3.9}_{-3.8}$	$10^9 A_s$	2.282	$2.27^{+0.18}_{-0.16}$	$100\theta_{s,\text{eq}}$	0.4568	$0.4570^{+0.0098}_{-0.0097}$
$A_{100}^{\text{PS}}$	259	$265^{+50}_{-50}$	$10^9 A_s e^{-2\tau}$	1.8997	$1.900^{+0.028}_{-0.028}$	$r_{\text{drag}}/D_V(0.57)$	0.07243	$0.0725^{+0.0015}_{-0.0015}$
$A_{143}^{\text{PS}}$	42.6	$47^{+20}_{-20}$	$D_{40}$	1215.6	$1217^{+30}_{-29}$	$H(0.57)$	95.94	$95.95^{+0.93}_{-0.89}$
$A_{143 \times 217}^{\text{PS}}$	34.8	$39^{+20}_{-20}$	$D_{220}$	5718	$5721^{+80}_{-82}$	$D_A(0.57)$	1337.2	$1337^{+25}_{-25}$
$A_{217}^{\text{PS}}$	97.9	$96^{+20}_{-20}$	$D_{810}$	2538.0	$2538^{+27}_{-27}$	$F_{\text{AP}}(0.57)$	0.6719	$0.6718^{+0.0067}_{-0.0064}$
$A^{\text{kSZ}}$	0.2	—	$D_{1420}$	813.3	$813^{+10}_{-9.9}$	$f\sigma_8(0.57)$	0.4907	$0.489^{+0.019}_{-0.019}$
$A_{100}^{\text{dustTT}}$	7.57	$7.6^{+3.6}_{-3.7}$	$D_{2000}$	228.87	$228.7^{+3.7}_{-3.7}$	$\sigma_8(0.57)$	0.6378	$0.636^{+0.024}_{-0.023}$
$A_{143}^{\text{dustTT}}$	9.13	$9.1^{+3.6}_{-3.6}$	$n_{s,0.002}$	0.9836	$0.983^{+0.013}_{-0.012}$	$f_{2000}^{143}$	31.5	$32^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.9	$17.3^{+8.2}_{-8.1}$	$Y_{\text{P}}$	0.250648	$0.25064^{+0.00021}_{-0.00020}$	$f_{2000}^{143 \times 217}$	33.90	$34^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	0.251993	$0.25199^{+0.00021}_{-0.00021}$	$f_{2000}^{217}$	107.30	$107.5^{+3.9}_{-4.0}$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	$10^5 \text{D}/\text{H}$	2.680	$2.683^{+0.090}_{-0.088}$	$\chi_{\text{lowTEB}}^2$	10495.36	$10496.0 (\nu: 3.6)$
$c_{217}$	0.99606	$0.9961^{+0.0028}_{-0.0028}$	$\text{Age}/\text{Gyr}$	13.411	$13.411^{+0.076}_{-0.076}$	$\chi_{\text{plik}}^2$	766.0	$779.8 (\nu: 17.1)$
$H_0$	70.57	$70.6^{+2.0}_{-2.0}$	$z_*$	1090.34	$1090.35^{+0.88}_{-0.85}$	$\chi_{\text{prior}}^2$	2.0	$7.4 (\nu: 6.4)$
$\Omega_\Lambda$	0.7047	$0.705^{+0.024}_{-0.026}$	$r_*$	141.40	$141.43^{+0.94}_{-0.95}$	$\chi_{\text{CMB}}^2$	11261.4	$11275.8 (\nu: 15.4)$

Best-fit  $\chi_{\text{eff}}^2 = 11263.42$ ;  $\bar{\chi}_{\text{eff}}^2 = 11283.25$ ;  $R - 1 = 0.00929$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.36 plik\_dx11dr2\_HM\_v18\_TT: 766.01

# 11.44 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_nnup39

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022615	$0.02261^{+0.00032}_{-0.00031}$	$A_{100 \times 217}^{\text{dustTE}}$	0.302	$0.30^{+0.17}_{-0.16}$	$10^5 \text{D/H}$	2.678	$2.680^{+0.061}_{-0.060}$
$\Omega_c h^2$	0.12490	$0.1249^{+0.0030}_{-0.0031}$	$A_{143}^{\text{dustTE}}$	0.154	$0.15^{+0.11}_{-0.11}$	Age/Gyr	13.422	$13.422^{+0.050}_{-0.052}$
$100\theta_{\text{MC}}$	1.04026	$1.04025^{+0.00064}_{-0.00063}$	$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.15}_{-0.16}$	$z_*$	1090.41	$1090.42^{+0.59}_{-0.59}$
$\tau$	0.0937	$0.091^{+0.035}_{-0.035}$	$A_{217}^{\text{dustTE}}$	1.66	$1.66^{+0.50}_{-0.50}$	$r_*$	141.14	$141.15^{+0.62}_{-0.61}$
$\ln(10^{10} A_s)$	3.134	$3.130^{+0.066}_{-0.067}$	$c_{100}$	0.99813	$0.9981^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04017	$1.04017^{+0.00063}_{-0.00062}$
$n_s$	0.9810	$0.9804^{+0.0098}_{-0.0095}$	$c_{217}$	0.99609	$0.9961^{+0.0028}_{-0.0028}$	$D_A/\text{Gpc}$	13.569	$13.570^{+0.058}_{-0.057}$
$y_{\text{cal}}$	1.00023	$1.0005^{+0.0050}_{-0.0049}$	$H_0$	70.12	$70.1^{+1.4}_{-1.4}$	$z_{\text{drag}}$	1061.15	$1061.14^{+0.63}_{-0.60}$
$A_{217}^{\text{CIB}}$	68.7	$66^{+10}_{-10}$	$\Omega_\Lambda$	0.6987	$0.699^{+0.017}_{-0.018}$	$r_{\text{drag}}$	143.68	$143.68^{+0.61}_{-0.60}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m$	0.3013	$0.301^{+0.018}_{-0.017}$	$k_D$	0.14325	$0.14324^{+0.00066}_{-0.00066}$
$A_{143}^{\text{tSZ}}$	7.31	$5.1^{+3.8}_{-3.8}$	$\Omega_m h^2$	0.14816	$0.1482^{+0.0028}_{-0.0029}$	$100\theta_D$	0.161624	$0.16163^{+0.00036}_{-0.00036}$
$A_{100}^{\text{PS}}$	259	$266^{+50}_{-50}$	$\Omega_m h^3$	0.10390	$0.10388^{+0.00064}_{-0.00063}$	$z_{\text{eq}}$	3350	$3350^{+65}_{-65}$
$A_{143}^{\text{PS}}$	40.9	$46^{+20}_{-20}$	$\sigma_8$	0.8571	$0.855^{+0.027}_{-0.027}$	$k_{\text{eq}}$	0.010488	$0.01049^{+0.00020}_{-0.00020}$
$A_{143 \times 217}^{\text{PS}}$	34	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4705	$0.469^{+0.019}_{-0.019}$	$100\theta_{\text{eq}}$	0.8232	$0.823^{+0.013}_{-0.012}$
$A_{217}^{\text{PS}}$	97.2	$97^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6350	$0.633^{+0.021}_{-0.021}$	$100\theta_{s,\text{eq}}$	0.4544	$0.4544^{+0.0066}_{-0.0064}$
$A^{\text{kSZ}}$	0.0	—	$\sigma_8/h^{0.5}$	1.0235	$1.021^{+0.032}_{-0.033}$	$r_{\text{drag}}/D_V(0.57)$	0.07205	$0.0721^{+0.0010}_{-0.00099}$
$A_{100}^{\text{dustTT}}$	7.49	$7.6^{+3.7}_{-3.7}$	$\langle d^2 \rangle^{1/2}$	2.505	$2.500^{+0.077}_{-0.077}$	$H(0.57)$	95.77	$95.77^{+0.62}_{-0.59}$
$A_{143}^{\text{dustTT}}$	9.08	$9.1^{+3.6}_{-3.6}$	$z_{\text{re}}$	11.44	$11.2^{+2.9}_{-3.1}$	$D_A(0.57)$	1342.7	$1343^{+17}_{-17}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.3^{+8.2}_{-8.2}$	$10^9 A_s$	2.298	$2.29^{+0.16}_{-0.15}$	$F_{\text{AP}}(0.57)$	0.67342	$0.6735^{+0.0045}_{-0.0044}$
$A_{217}^{\text{dustTT}}$	81.6	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.9050	$1.906^{+0.024}_{-0.024}$	$f\sigma_8(0.57)$	0.4955	$0.494^{+0.016}_{-0.016}$
$A_{100}^{\text{dustEE}}$	0.0821	$0.082^{+0.011}_{-0.011}$	$D_{40}$	1223.3	$1225^{+26}_{-25}$	$\sigma_8(0.57)$	0.6402	$0.639^{+0.021}_{-0.021}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0498	$0.0497^{+0.0097}_{-0.0098}$	$D_{220}$	5724	$5729^{+77}_{-75}$	$f_{2000}^{143}$	30.9	$32^{+5}_{-5}$
$A_{100 \times 217}^{\text{dustEE}}$	0.098	$0.099^{+0.063}_{-0.063}$	$D_{810}$	2539.4	$2540^{+27}_{-27}$	$f_{2000}^{143 \times 217}$	33.59	$33.9^{+3.8}_{-3.8}$
$A_{143}^{\text{dustEE}}$	0.1013	$0.101^{+0.013}_{-0.013}$	$D_{1420}$	813.2	$813.2^{+9.5}_{-9.3}$	$f_{2000}^{217}$	106.97	$107.3^{+3.7}_{-3.7}$
$A_{143 \times 217}^{\text{dustEE}}$	0.220	$0.221^{+0.091}_{-0.091}$	$D_{2000}$	228.97	$228.9^{+3.2}_{-3.2}$	$\chi_{\text{lowTEB}}^2$	10496.26	$10496.7 (\nu: 3.5)$
$A_{217}^{\text{dustEE}}$	0.647	$0.64^{+0.25}_{-0.25}$	$n_{s,0.002}$	0.9810	$0.9804^{+0.0098}_{-0.0095}$	$\chi_{\text{plik}}^2$	2436.8	$2456.1 (\nu: 24.4)$
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.076}_{-0.074}$	$Y_P$	0.250653	$0.25065^{+0.00014}_{-0.00014}$	$\chi_{\text{prior}}^2$	7.6	$19.9 (\nu: 15.5)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.131^{+0.057}_{-0.057}$	$Y_P^{\text{BBN}}$	0.251998	$0.25200^{+0.00014}_{-0.00014}$	$\chi_{\text{CMB}}^2$	12933.0	$12952.9 (\nu: 22.8)$

Best-fit  $\chi_{\text{eff}}^2 = 12940.62$ ;  $\bar{\chi}_{\text{eff}}^2 = 12972.81$ ;  $R - 1 = 0.00717$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.26 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2436.79

### 11.45 base\_nnu\_plikHM\_TT\_lowTEB\_nnup57

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022748	$0.02277^{+0.00047}_{-0.00047}$	$\Omega_m$	0.2872	$0.287^{+0.026}_{-0.025}$	$100\theta_*$	1.04016	$1.04019^{+0.00091}_{-0.00091}$
$\Omega_c h^2$	0.12571	$0.1256^{+0.0048}_{-0.0047}$	$\Omega_m h^2$	0.14910	$0.1490^{+0.0046}_{-0.0043}$	$D_A/\text{Gpc}$	13.461	$13.463^{+0.087}_{-0.089}$
$100\theta_{\text{MC}}$	1.04037	$1.04040^{+0.00092}_{-0.00093}$	$\Omega_m h^3$	0.10744	$0.1075^{+0.0010}_{-0.00098}$	$z_{\text{drag}}$	1061.65	$1061.69^{+0.92}_{-0.91}$
$\tau$	0.0954	$0.098^{+0.039}_{-0.040}$	$\sigma_8$	0.8595	$0.861^{+0.029}_{-0.031}$	$r_{\text{drag}}$	142.50	$142.51^{+0.93}_{-0.95}$
$\ln(10^{10} A_s)$	3.140	$3.145^{+0.072}_{-0.075}$	$\sigma_8 \Omega_m^{0.5}$	0.4606	$0.461^{+0.026}_{-0.026}$	$k_D$	0.14399	$0.1440^{+0.0011}_{-0.0010}$
$n_s$	0.9910	$0.991^{+0.013}_{-0.013}$	$\sigma_8 \Omega_m^{0.25}$	0.6292	$0.630^{+0.026}_{-0.027}$	$100\theta_D$	0.16208	$0.16207^{+0.00053}_{-0.00052}$
$y_{\text{cal}}$	1.00033	$1.0005^{+0.0049}_{-0.0049}$	$\sigma_8/h^{0.5}$	1.0126	$1.014^{+0.038}_{-0.039}$	$z_{\text{eq}}$	3295	$3293^{+100}_{-97}$
$A_{217}^{\text{CIB}}$	69.2	$66^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.468	$2.472^{+0.088}_{-0.091}$	$k_{\text{eq}}$	0.010436	$0.01043^{+0.00032}_{-0.00031}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$z_{\text{re}}$	11.59	$11.7^{+3.3}_{-3.4}$	$100\theta_{\text{eq}}$	0.8340	$0.835^{+0.020}_{-0.020}$
$A_{143}^{\text{tSZ}}$	6.09	$4.6^{+3.8}_{-4.0}$	$10^9 A_s$	2.309	$2.32^{+0.17}_{-0.17}$	$100\theta_{s,\text{eq}}$	0.4599	$0.460^{+0.010}_{-0.010}$
$A_{100}^{\text{PS}}$	265	$268^{+50}_{-50}$	$10^9 A_s e^{-2\tau}$	1.9083	$1.908^{+0.029}_{-0.028}$	$r_{\text{drag}}/D_V(0.57)$	0.07290	$0.0730^{+0.0016}_{-0.0016}$
$A_{143}^{\text{PS}}$	44.0	$48^{+20}_{-20}$	$D_{40}$	1207.2	$1209^{+29}_{-28}$	$H(0.57)$	97.33	$97.4^{+1.0}_{-0.96}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$D_{220}$	5721	$5725^{+81}_{-80}$	$D_A(0.57)$	1313.9	$1313^{+26}_{-26}$
$A_{217}^{\text{PS}}$	95.6	$96^{+20}_{-20}$	$D_{810}$	2540.0	$2541^{+27}_{-27}$	$F_{\text{AP}}(0.57)$	0.6697	$0.6696^{+0.0069}_{-0.0066}$
$A^{\text{kSZ}}$	1.8	—	$D_{1420}$	812.5	$812.8^{+9.7}_{-9.9}$	$f\sigma_8(0.57)$	0.4927	$0.493^{+0.019}_{-0.019}$
$A_{100}^{\text{dustTT}}$	7.49	$7.6^{+3.7}_{-3.6}$	$D_{2000}$	228.00	$228.2^{+3.6}_{-3.6}$	$\sigma_8(0.57)$	0.6458	$0.648^{+0.023}_{-0.024}$
$A_{143}^{\text{dustTT}}$	9.15	$9.1^{+3.6}_{-3.6}$	$n_{s,0.002}$	0.9910	$0.991^{+0.013}_{-0.013}$	$f_{2000}^{143}$	33.0	$33^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.3^{+8.1}_{-8.2}$	$Y_{\text{P}}$	0.252987	$0.25300^{+0.00021}_{-0.00021}$	$f_{2000}^{143 \times 217}$	34.93	$35^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	81.7	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	0.254340	$0.25435^{+0.00021}_{-0.00021}$	$f_{2000}^{217}$	108.29	$108.1^{+4.0}_{-4.1}$
$c_{100}$	0.99790	$0.9979^{+0.0015}_{-0.0015}$	$10^5 D/H$	2.714	$2.711^{+0.091}_{-0.089}$	$\chi_{\text{lowTEB}}^2$	10494.9	$10496.1 (\nu: 4.3)$
$c_{217}$	0.99626	$0.9962^{+0.0028}_{-0.0028}$	$\text{Age}/\text{Gyr}$	13.238	$13.234^{+0.077}_{-0.078}$	$\chi_{\text{plik}}^2$	767.8	$781.1 (\nu: 17.5)$
$H_0$	72.06	$72.1^{+2.2}_{-2.1}$	$z_*$	1090.48	$1090.45^{+0.89}_{-0.88}$	$\chi_{\text{prior}}^2$	2.3	$7.5 (\nu: 6.5)$
$\Omega_\Lambda$	0.7128	$0.713^{+0.025}_{-0.026}$	$r_*$	140.02	$140.04^{+0.95}_{-0.96}$	$\chi_{\text{CMB}}^2$	11262.7	$11277.3 (\nu: 15.5)$

Best-fit  $\chi_{\text{eff}}^2 = 11265.05$ ;  $\bar{\chi}_{\text{eff}}^2 = 11284.75$ ;  $R - 1 = 0.00538$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10494.90 plik\_dx11dr2\_HM\_v18\_TT: 767.82

# 11.46 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_nnup57

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022771	$0.02276^{+0.00032}_{-0.00031}$	$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.17}_{-0.16}$	$10^5 \text{D/H}$	2.709	$2.712^{+0.061}_{-0.060}$
$\Omega_c h^2$	0.12727	$0.1273^{+0.0031}_{-0.0031}$	$A_{143}^{\text{dustTE}}$	0.155	$0.15^{+0.11}_{-0.11}$	Age/Gyr	13.252	$13.253^{+0.051}_{-0.051}$
$100\theta_{\text{MC}}$	1.04002	$1.04002^{+0.00063}_{-0.00063}$	$A_{143 \times 217}^{\text{dustTE}}$	0.335	$0.34^{+0.16}_{-0.16}$	$z_*$	1090.59	$1090.61^{+0.60}_{-0.60}$
$\tau$	0.0985	$0.096^{+0.033}_{-0.034}$	$A_{217}^{\text{dustTE}}$	1.66	$1.67^{+0.51}_{-0.49}$	$r_*$	139.63	$139.64^{+0.61}_{-0.60}$
$\ln(10^{10} A_s)$	3.149	$3.145^{+0.064}_{-0.067}$	$c_{100}$	0.99812	$0.9981^{+0.0015}_{-0.0015}$	$100\theta_*$	1.03981	$1.03981^{+0.00062}_{-0.00062}$
$n_s$	0.9880	$0.9875^{+0.0097}_{-0.0095}$	$c_{217}$	0.99615	$0.9962^{+0.0028}_{-0.0028}$	$D_A/\text{Gpc}$	13.429	$13.429^{+0.057}_{-0.056}$
$y_{\text{cal}}$	1.00029	$1.0005^{+0.0049}_{-0.0049}$	$H_0$	71.41	$71.4^{+1.4}_{-1.4}$	$z_{\text{drag}}$	1061.80	$1061.79^{+0.61}_{-0.59}$
$A_{217}^{\text{CIB}}$	68.9	$66^{+10}_{-10}$	$\Omega_\Lambda$	0.7045	$0.704^{+0.017}_{-0.017}$	$r_{\text{drag}}$	142.10	$142.11^{+0.60}_{-0.59}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m$	0.2955	$0.296^{+0.017}_{-0.017}$	$k_D$	0.14445	$0.14443^{+0.00066}_{-0.00066}$
$A_{143}^{\text{tSZ}}$	7.13	$4.9^{+3.9}_{-3.8}$	$\Omega_m h^2$	0.15069	$0.1507^{+0.0029}_{-0.0029}$	$100\theta_D$	0.161951	$0.16197^{+0.00036}_{-0.00035}$
$A_{100}^{\text{PS}}$	263	$269^{+50}_{-50}$	$\Omega_m h^3$	0.10761	$0.10758^{+0.00064}_{-0.00065}$	$z_{\text{eq}}$	3331	$3331^{+64}_{-65}$
$A_{143}^{\text{PS}}$	42.9	$47^{+20}_{-20}$	$\sigma_8$	0.8677	$0.866^{+0.027}_{-0.028}$	$k_{\text{eq}}$	0.010548	$0.01055^{+0.00020}_{-0.00021}$
$A_{143 \times 217}^{\text{PS}}$	35	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4717	$0.471^{+0.019}_{-0.019}$	$100\theta_{\text{eq}}$	0.8272	$0.827^{+0.013}_{-0.012}$
$A_{217}^{\text{PS}}$	97.7	$96^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6398	$0.638^{+0.021}_{-0.022}$	$100\theta_{s,\text{eq}}$	0.4563	$0.4563^{+0.0066}_{-0.0063}$
$A^{\text{kSZ}}$	0.3	—	$\sigma_8/h^{0.5}$	1.0268	$1.024^{+0.032}_{-0.033}$	$r_{\text{drag}}/D_V(0.57)$	0.07235	$0.0723^{+0.0010}_{-0.0010}$
$A_{100}^{\text{dustTT}}$	7.59	$7.7^{+3.7}_{-3.7}$	$\langle d^2 \rangle^{1/2}$	2.502	$2.497^{+0.075}_{-0.077}$	$H(0.57)$	97.09	$97.08^{+0.64}_{-0.61}$
$A_{143}^{\text{dustTT}}$	9.20	$9.2^{+3.6}_{-3.6}$	$z_{\text{re}}$	11.88	$11.6^{+2.9}_{-3.0}$	$D_A(0.57)$	1321.5	$1322^{+17}_{-17}$
$A_{143 \times 217}^{\text{dustTT}}$	18.0	$17.3^{+8.3}_{-8.2}$	$10^9 A_s$	2.332	$2.32^{+0.15}_{-0.15}$	$F_{\text{AP}}(0.57)$	0.67193	$0.6720^{+0.0044}_{-0.0044}$
$A_{217}^{\text{dustTT}}$	82.0	$81^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.9152	$1.916^{+0.025}_{-0.024}$	$f\sigma_8(0.57)$	0.4999	$0.499^{+0.016}_{-0.016}$
$A_{100}^{\text{dustEE}}$	0.0822	$0.082^{+0.011}_{-0.011}$	$D_{40}$	1216.2	$1217^{+25}_{-24}$	$\sigma_8(0.57)$	0.6497	$0.648^{+0.021}_{-0.021}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0499	$0.0501^{+0.0097}_{-0.0098}$	$D_{220}$	5724	$5727^{+77}_{-75}$	$f_{2000}^{143}$	31.9	$32^{+5}_{-5}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.099^{+0.064}_{-0.065}$	$D_{810}$	2541.8	$2542^{+27}_{-27}$	$f_{2000}^{143 \times 217}$	34.37	$34.6^{+3.7}_{-3.8}$
$A_{143}^{\text{dustEE}}$	0.1016	$0.102^{+0.014}_{-0.013}$	$D_{1420}$	812.6	$812.4^{+9.4}_{-9.3}$	$f_{2000}^{217}$	107.67	$107.9^{+3.7}_{-3.7}$
$A_{143 \times 217}^{\text{dustEE}}$	0.220	$0.219^{+0.092}_{-0.091}$	$D_{2000}$	228.28	$228.1^{+3.2}_{-3.2}$	$\chi_{\text{lowTEB}}^2$	10496.02	$10496.4 (\nu: 3.5)$
$A_{217}^{\text{dustEE}}$	0.638	$0.64^{+0.25}_{-0.26}$	$n_{s,0.002}$	0.9880	$0.9875^{+0.0097}_{-0.0095}$	$\chi_{\text{plik}}^2$	2441.4	$2460.4 (\nu: 24.8)$
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.075}_{-0.074}$	$Y_P$	0.252997	$0.25299^{+0.00014}_{-0.00014}$	$\chi_{\text{prior}}^2$	7.7	$20 (\nu: 16.4)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.132^{+0.058}_{-0.057}$	$Y_P^{\text{BBN}}$	0.254350	$0.25434^{+0.00014}_{-0.00014}$	$\chi_{\text{CMB}}^2$	12937.5	$12956.8 (\nu: 22.9)$

Best-fit  $\chi_{\text{eff}}^2 = 12945.11$ ;  $\bar{\chi}_{\text{eff}}^2 = 12977.07$ ;  $R - 1 = 0.01276$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.02 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2441.43



### 11.47 base\_nnu\_plikHM\_TT\_lowTEB\_nnu1

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.023135	$0.02316^{+0.00048}_{-0.00049}$	$\Omega_m$	0.2667	$0.268^{+0.025}_{-0.023}$	$100\theta_*$	1.03965	$1.03964^{+0.00093}_{-0.00093}$
$\Omega_c h^2$	0.12964	$0.1298^{+0.0050}_{-0.0048}$	$\Omega_m h^2$	0.15342	$0.1536^{+0.0047}_{-0.0045}$	$D_A/\text{Gpc}$	13.172	$13.168^{+0.084}_{-0.087}$
$100\theta_{\text{MC}}$	1.04016	$1.04014^{+0.00095}_{-0.00095}$	$\Omega_m h^3$	0.11636	$0.1164^{+0.0011}_{-0.0011}$	$z_{\text{drag}}$	1063.14	$1063.18^{+0.91}_{-0.92}$
$\tau$	0.1112	$0.113^{+0.041}_{-0.043}$	$\sigma_8$	0.8822	$0.885^{+0.032}_{-0.033}$	$r_{\text{drag}}$	139.27	$139.21^{+0.90}_{-0.92}$
$\ln(10^{10} A_s)$	3.179	$3.184^{+0.078}_{-0.080}$	$\sigma_8 \Omega_m^{0.5}$	0.4556	$0.458^{+0.026}_{-0.025}$	$k_D$	0.14640	$0.1465^{+0.0010}_{-0.0010}$
$n_s$	1.0098	$1.010^{+0.014}_{-0.013}$	$\sigma_8 \Omega_m^{0.25}$	0.6340	$0.636^{+0.027}_{-0.027}$	$100\theta_D$	0.16292	$0.16288^{+0.00054}_{-0.00051}$
$y_{\text{cal}}$	1.00040	$1.0005^{+0.0049}_{-0.0047}$	$\sigma_8/h^{0.5}$	1.0130	$1.016^{+0.039}_{-0.039}$	$z_{\text{eq}}$	3219	$3223^{+99}_{-96}$
$A_{217}^{\text{CIB}}$	70.3	$68^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.446	$2.453^{+0.088}_{-0.089}$	$k_{\text{eq}}$	0.010462	$0.01048^{+0.00032}_{-0.00031}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$z_{\text{re}}$	12.93	$13.0^{+3.3}_{-3.5}$	$100\theta_{\text{eq}}$	0.8501	$0.850^{+0.021}_{-0.020}$
$A_{143}^{\text{tSZ}}$	4.75	$4.2^{+3.7}_{-4.1}$	$10^9 A_s$	2.402	$2.42^{+0.19}_{-0.19}$	$100\theta_{s,\text{eq}}$	0.4679	$0.468^{+0.010}_{-0.010}$
$A_{100}^{\text{PS}}$	277	$275^{+50}_{-60}$	$10^9 A_s e^{-2\tau}$	1.9234	$1.925^{+0.029}_{-0.028}$	$r_{\text{drag}}/D_V(0.57)$	0.07417	$0.0741^{+0.0017}_{-0.0016}$
$A_{143}^{\text{PS}}$	46.4	$51^{+20}_{-20}$	$D_{40}$	1187.7	$1190^{+29}_{-28}$	$H(0.57)$	100.78	$100.8^{+1.1}_{-1.1}$
$A_{143 \times 217}^{\text{PS}}$	32	$40^{+20}_{-20}$	$D_{220}$	5726	$5727^{+81}_{-78}$	$D_A(0.57)$	1258.6	$1259^{+26}_{-25}$
$A_{217}^{\text{PS}}$	92.4	$96^{+20}_{-20}$	$D_{810}$	2542.9	$2544^{+28}_{-27}$	$F_{\text{AP}}(0.57)$	0.6643	$0.6645^{+0.0066}_{-0.0062}$
$A^{\text{kSZ}}$	4.5	—	$D_{1420}$	810.8	$811^{+10}_{-9.9}$	$f\sigma_8(0.57)$	0.4987	$0.500^{+0.020}_{-0.020}$
$A_{100}^{\text{dustTT}}$	7.65	$7.7^{+3.7}_{-3.6}$	$D_{2000}$	226.27	$226.6^{+3.7}_{-3.7}$	$\sigma_8(0.57)$	0.6688	$0.671^{+0.026}_{-0.026}$
$A_{143}^{\text{dustTT}}$	9.16	$9.2^{+3.6}_{-3.6}$	$n_{s,0.002}$	1.0098	$1.010^{+0.014}_{-0.013}$	$f_{2000}^{143}$	35.4	$35^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.0	$17.5^{+8.1}_{-8.1}$	$Y_{\text{P}}$	0.258339	$0.25835^{+0.00020}_{-0.00021}$	$f_{2000}^{143 \times 217}$	36.72	$37^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	80.8	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	0.259712	$0.25972^{+0.00020}_{-0.00021}$	$f_{2000}^{217}$	109.97	$109.6^{+4.1}_{-4.1}$
$c_{100}$	0.99787	$0.9979^{+0.0015}_{-0.0015}$	$10^5 \text{D}/\text{H}$	2.782	$2.778^{+0.095}_{-0.089}$	$\chi_{\text{lowTEB}}^2$	10495.4	$10496.6 (\nu: 7.1)$
$c_{217}$	0.99637	$0.9963^{+0.0028}_{-0.0028}$	$\text{Age}/\text{Gyr}$	12.836	$12.834^{+0.079}_{-0.078}$	$\chi_{\text{plik}}^2$	772.2	$785.8 (\nu: 20.4)$
$H_0$	75.84	$75.8^{+2.2}_{-2.2}$	$z_*$	1090.73	$1090.71^{+0.93}_{-0.88}$	$\chi_{\text{prior}}^2$	2.9	$7.6 (\nu: 6.6)$
$\Omega_\Lambda$	0.7333	$0.732^{+0.023}_{-0.025}$	$r_*$	136.95	$136.90^{+0.92}_{-0.94}$	$\chi_{\text{CMB}}^2$	11267.5	$11282.5 (\nu: 15.6)$

Best-fit  $\chi_{\text{eff}}^2 = 11270.42$ ;  $\bar{\chi}_{\text{eff}}^2 = 11290.08$ ;  $R - 1 = 0.00663$

$\chi_{\text{eff}}^2$ : CMB - lowl.SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.37 plik\_dx11dr2\_HM\_v18\_TT: 772.19

# 11.48 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_nnu1

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.023117	$0.02313^{+0.00032}_{-0.00031}$	$A_{100 \times 217}^{\text{dustTE}}$	0.300	$0.30^{+0.17}_{-0.17}$	$10^5 \text{D/H}$	2.785	$2.783^{+0.061}_{-0.059}$
$\Omega_c h^2$	0.13287	$0.1328^{+0.0033}_{-0.0033}$	$A_{143}^{\text{dustTE}}$	0.152	$0.15^{+0.11}_{-0.11}$	Age/Gyr	12.8680	$12.866^{+0.049}_{-0.051}$
$100\theta_{\text{MC}}$	1.03957	$1.03957^{+0.00062}_{-0.00062}$	$A_{143 \times 217}^{\text{dustTE}}$	0.334	$0.33^{+0.16}_{-0.16}$	$z_*$	1091.01	$1090.99^{+0.60}_{-0.59}$
$\tau$	0.1083	$0.110^{+0.034}_{-0.034}$	$A_{217}^{\text{dustTE}}$	1.66	$1.66^{+0.50}_{-0.50}$	$r_*$	136.24	$136.25^{+0.60}_{-0.59}$
$\ln(10^{10} A_s)$	3.180	$3.184^{+0.066}_{-0.067}$	$c_{100}$	0.99803	$0.9980^{+0.0015}_{-0.0015}$	$100\theta_*$	1.03906	$1.03907^{+0.00061}_{-0.00062}$
$n_s$	1.0036	$1.0041^{+0.0098}_{-0.0098}$	$c_{217}$	0.99642	$0.9964^{+0.0028}_{-0.0029}$	$D_A/\text{Gpc}$	13.112	$13.113^{+0.055}_{-0.056}$
$y_{\text{cal}}$	1.00025	$1.0005^{+0.0048}_{-0.0049}$	$H_0$	74.47	$74.5^{+1.5}_{-1.4}$	$z_{\text{drag}}$	1063.29	$1063.33^{+0.59}_{-0.55}$
$A_{217}^{\text{CIB}}$	70.8	$68^{+10}_{-10}$	$\Omega_\Lambda$	0.7176	$0.718^{+0.016}_{-0.016}$	$r_{\text{drag}}$	138.56	$138.56^{+0.59}_{-0.58}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m$	0.2824	$0.282^{+0.016}_{-0.016}$	$k_D$	0.14721	$0.14722^{+0.00067}_{-0.00067}$
$A_{143}^{\text{tSZ}}$	5.62	$4.6^{+3.9}_{-4.1}$	$\Omega_m h^2$	0.15663	$0.1566^{+0.0031}_{-0.0030}$	$100\theta_D$	0.162753	$0.16274^{+0.00035}_{-0.00035}$
$A_{100}^{\text{PS}}$	276	$275^{+50}_{-50}$	$\Omega_m h^3$	0.11664	$0.11666^{+0.00068}_{-0.00069}$	$z_{\text{eq}}$	3286	$3285^{+64}_{-64}$
$A_{143}^{\text{PS}}$	45.4	$50^{+20}_{-20}$	$\sigma_8$	0.8908	$0.892^{+0.028}_{-0.028}$	$k_{\text{eq}}$	0.010682	$0.01068^{+0.00021}_{-0.00021}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4734	$0.474^{+0.019}_{-0.019}$	$100\theta_{\text{eq}}$	0.8364	$0.837^{+0.013}_{-0.013}$
$A_{217}^{\text{PS}}$	92.8	$95^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6494	$0.650^{+0.021}_{-0.022}$	$100\theta_{s,\text{eq}}$	0.4608	$0.4610^{+0.0067}_{-0.0065}$
$A^{\text{kSZ}}$	3.4	—	$\sigma_8/h^{0.5}$	1.0322	$1.034^{+0.033}_{-0.033}$	$r_{\text{drag}}/D_V(0.57)$	0.07307	$0.0731^{+0.0011}_{-0.0010}$
$A_{100}^{\text{dustTT}}$	7.78	$7.8^{+3.6}_{-3.6}$	$\langle d^2 \rangle^{1/2}$	2.490	$2.494^{+0.075}_{-0.077}$	$H(0.57)$	100.22	$100.25^{+0.69}_{-0.65}$
$A_{143}^{\text{dustTT}}$	9.33	$9.3^{+3.6}_{-3.6}$	$z_{\text{re}}$	12.79	$12.9^{+2.6}_{-2.9}$	$D_A(0.57)$	1273.7	$1273^{+16}_{-17}$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.6^{+8.1}_{-8.2}$	$10^9 A_s$	2.404	$2.41^{+0.16}_{-0.16}$	$F_{\text{AP}}(0.57)$	0.66849	$0.6684^{+0.0043}_{-0.0043}$
$A_{217}^{\text{dustTT}}$	81.2	$81^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.9353	$1.937^{+0.024}_{-0.024}$	$f\sigma_8(0.57)$	0.5090	$0.510^{+0.016}_{-0.017}$
$A_{100}^{\text{dustEE}}$	0.0833	$0.083^{+0.011}_{-0.011}$	$D_{40}$	1199.5	$1201^{+25}_{-25}$	$\sigma_8(0.57)$	0.6706	$0.672^{+0.022}_{-0.022}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0510	$0.0510^{+0.0097}_{-0.0098}$	$D_{220}$	5721	$5725^{+76}_{-75}$	$f_{2000}^{143}$	34.7	$35^{+5}_{-5}$
$A_{100 \times 217}^{\text{dustEE}}$	0.098	$0.098^{+0.064}_{-0.064}$	$D_{810}$	2544.4	$2546^{+26}_{-26}$	$f_{2000}^{143 \times 217}$	36.44	$36.3^{+3.8}_{-3.8}$
$A_{143}^{\text{dustEE}}$	0.1025	$0.103^{+0.014}_{-0.013}$	$D_{1420}$	810.0	$810.9^{+9.1}_{-9.1}$	$f_{2000}^{217}$	109.57	$109.4^{+3.7}_{-3.8}$
$A_{143 \times 217}^{\text{dustEE}}$	0.216	$0.216^{+0.091}_{-0.091}$	$D_{2000}$	226.27	$226.6^{+3.1}_{-3.1}$	$\chi_{\text{lowTEB}}^2$	10495.7	$10496.6 (\nu: 5.0)$
$A_{217}^{\text{dustEE}}$	0.634	$0.63^{+0.26}_{-0.25}$	$n_{s,0.002}$	1.0036	$1.0041^{+0.0098}_{-0.0098}$	$\chi_{\text{plik}}^2$	2455.7	$2474.5 (\nu: 26.9)$
$A_{100}^{\text{dustTE}}$	0.140	$0.140^{+0.074}_{-0.075}$	$Y_P$	0.258332	$0.25834^{+0.00013}_{-0.00014}$	$\chi_{\text{prior}}^2$	9.0	$21 (\nu: 16.8)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.056}_{-0.057}$	$Y_P^{\text{BBN}}$	0.259704	$0.25971^{+0.00013}_{-0.00014}$	$\chi_{\text{CMB}}^2$	12951.4	$12971.2 (\nu: 23.6)$

Best-fit  $\chi_{\text{eff}}^2 = 12960.48$ ;  $\bar{\chi}_{\text{eff}}^2 = 12992.28$ ;  $R - 1 = 0.00975$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.71 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2455.73

### 11.49 base\_nnu\_plikHM\_TT\_lowTEB\_nnup39\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022503	$0.02249^{+0.00039}_{-0.00039}$	$\Omega_m h^3$	0.10380	$0.10376^{+0.00094}_{-0.00097}$	$k_D$	0.14315	$0.14309^{+0.00087}_{-0.00090}$
$\Omega_c h^2$	0.12532	$0.1252^{+0.0027}_{-0.0026}$	$\sigma_8$	0.8522	$0.851^{+0.030}_{-0.029}$	$100\theta_D$	0.16178	$0.16180^{+0.00052}_{-0.00050}$
$100\theta_{MC}$	1.04035	$1.04036^{+0.00082}_{-0.00081}$	$\sigma_8 \Omega_m^{0.5}$	0.4697	$0.468^{+0.020}_{-0.020}$	$z_{eq}$	3357	$3354^{+59}_{-57}$
$\tau$	0.0855	$0.085^{+0.036}_{-0.036}$	$\sigma_8 \Omega_m^{0.25}$	0.6327	$0.631^{+0.024}_{-0.023}$	$k_{eq}$	0.010510	$0.01050^{+0.00019}_{-0.00018}$
$\ln(10^{10} A_s)$	3.119	$3.117^{+0.071}_{-0.070}$	$\sigma_8/h^{0.5}$	1.0192	$1.017^{+0.036}_{-0.036}$	$100\theta_{eq}$	0.8217	$0.822^{+0.011}_{-0.011}$
$n_s$	0.9799	$0.9799^{+0.0089}_{-0.0089}$	$\langle d^2 \rangle^{1/2}$	2.493	$2.489^{+0.085}_{-0.086}$	$100\theta_{s,eq}$	0.4537	$0.4540^{+0.0056}_{-0.0057}$
$y_{cal}$	1.00048	$1.0004^{+0.0050}_{-0.0048}$	$z_{re}$	10.77	$10.6^{+3.0}_{-3.4}$	$r_{drag}/D_V(0.57)$	0.07194	$0.07198^{+0.00086}_{-0.00086}$
$A_{217}^{CIB}$	68.8	$66^{+10}_{-10}$	$10^9 A_s$	2.263	$2.26^{+0.16}_{-0.15}$	$H(0.57)$	95.66	$95.67^{+0.57}_{-0.55}$
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.9074	$1.906^{+0.024}_{-0.023}$	$D_A(0.57)$	1345.5	$1345^{+15}_{-15}$
$A_{143}^{tSZ}$	6.76	$4.7^{+3.8}_{-3.7}$	$D_{40}$	1221.8	$1222^{+26}_{-26}$	$F_{AP}(0.57)$	0.67405	$0.6739^{+0.0039}_{-0.0038}$
$A_{100}^{PS}$	261	$266^{+50}_{-50}$	$D_{220}$	5717	$5716^{+79}_{-79}$	$f\sigma_8(0.57)$	0.4933	$0.492^{+0.018}_{-0.018}$
$A_{143}^{PS}$	43.5	$48^{+20}_{-20}$	$D_{810}$	2540.8	$2540^{+28}_{-27}$	$\sigma_8(0.57)$	0.6359	$0.635^{+0.023}_{-0.022}$
$A_{143 \times 217}^{PS}$	34.8	$40^{+20}_{-20}$	$D_{1420}$	813.0	$813^{+10}_{-9.8}$	$f_{2000}^{143}$	32.1	$33^{+6}_{-6}$
$A_{217}^{PS}$	97.5	$97^{+20}_{-20}$	$D_{2000}$	228.56	$228.4^{+3.6}_{-3.5}$	$f_{2000}^{143 \times 217}$	34.39	$35^{+4}_{-4}$
$A^{kSZ}$	0.6	—	$n_{s,0.002}$	0.9799	$0.9799^{+0.0089}_{-0.0089}$	$f_{2000}^{217}$	107.79	$107.9^{+3.8}_{-3.9}$
$A_{100}^{dustTT}$	7.45	$7.5^{+3.7}_{-3.7}$	$Y_P$	0.250603	$0.25060^{+0.00017}_{-0.00017}$	$\chi_{lowTEB}^2$	10495.24	$10495.9 (\nu: 2.8)$
$A_{143}^{dustTT}$	9.04	$9.1^{+3.6}_{-3.6}$	$Y_P^{BBN}$	0.251949	$0.25194^{+0.00017}_{-0.00018}$	$\chi_{plik}^2$	766.5	$779.6 (\nu: 16.0)$
$A_{143 \times 217}^{dustTT}$	17.8	$17.3^{+8.2}_{-8.1}$	$10^5 D/H$	2.700	$2.702^{+0.077}_{-0.075}$	$\chi_{6DF}^2$	0.000	$0.043 (\nu: 0.0)$
$A_{217}^{dustTT}$	82.0	$82^{+10}_{-10}$	Age/Gyr	13.432	$13.432^{+0.055}_{-0.055}$	$\chi_{MGS}^2$	1.68	$1.81 (\nu: 0.2)$
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1090.59	$1090.60^{+0.62}_{-0.61}$	$\chi_{DR11CMass}^2$	2.50	$3.00 (\nu: 0.3)$
$c_{217}$	0.99617	$0.9961^{+0.0029}_{-0.0028}$	$r_*$	141.12	$141.16^{+0.62}_{-0.61}$	$\chi_{DR11LOWZ}^2$	0.28	$0.39 (\nu: 0.1)$
$H_0$	69.91	$70.0^{+1.2}_{-1.2}$	$100\theta_*$	1.04028	$1.04029^{+0.00082}_{-0.00080}$	$\chi_{prior}^2$	2.1	$7.5 (\nu: 6.5)$
$\Omega_\Lambda$	0.6963	$0.697^{+0.015}_{-0.015}$	$D_A/Gpc$	13.566	$13.569^{+0.060}_{-0.060}$	$\chi_{CMB}^2$	11261.8	$11275.5 (\nu: 14.5)$
$\Omega_m$	0.3037	$0.303^{+0.015}_{-0.015}$	$z_{drag}$	1060.92	$1060.89^{+0.87}_{-0.89}$	$\chi_{BAO}^2$	4.46	$5.2 (\nu: 0.7)$
$\Omega_m h^2$	0.14847	$0.1483^{+0.0026}_{-0.0025}$	$r_{drag}$	143.69	$143.74^{+0.67}_{-0.66}$			

Best-fit  $\chi_{eff}^2 = 11268.34$ ;  $\bar{\chi}_{eff}^2 = 11288.24$ ;  $R - 1 = 0.00687$

$\chi_{eff}^2$ : BAO - 6DF: 0.00 MGS: 1.68 DR11CMass: 2.50 DR11LOWZ: 0.28 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.25 plik\_dx11dr2\_HM\_v18\_TT: 766.51

# 11.50 base\_nnu\_plikHM\_TT\_lowTEB\_nnup39\_BAO\_post\_lensing\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022477	$0.02247^{+0.00038}_{-0.00039}$	$\sigma_8$	0.8335	$0.833^{+0.018}_{-0.018}$	$z_{\text{eq}}$	3341	$3339^{+54}_{-54}$
$\Omega_c h^2$	0.12467	$0.1246^{+0.0025}_{-0.0025}$	$\sigma_8 \Omega_m^{0.5}$	0.4569	$0.456^{+0.013}_{-0.013}$	$k_{\text{eq}}$	0.010462	$0.01045^{+0.00017}_{-0.00017}$
$100\theta_{\text{MC}}$	1.04041	$1.04042^{+0.00083}_{-0.00082}$	$\sigma_8 \Omega_m^{0.25}$	0.6171	$0.617^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	0.8245	$0.825^{+0.010}_{-0.010}$
$\tau$	0.0669	$0.067^{+0.026}_{-0.025}$	$\sigma_8/h^{0.5}$	0.9953	$0.995^{+0.021}_{-0.022}$	$100\theta_{\text{s,eq}}$	0.4551	$0.4554^{+0.0053}_{-0.0052}$
$\ln(10^{10} A_s)$	3.0797	$3.079^{+0.048}_{-0.048}$	$\langle d^2 \rangle^{1/2}$	2.438	$2.435^{+0.050}_{-0.050}$	$r_{\text{drag}}/D_V(0.57)$	0.07214	$0.07217^{+0.00082}_{-0.00079}$
$n_s$	0.9800	$0.9805^{+0.0087}_{-0.0085}$	$z_{\text{re}}$	9.04	$9.0^{+2.5}_{-2.5}$	$H(0.57)$	95.72	$95.73^{+0.56}_{-0.55}$
$y_{\text{cal}}$	1.00019	$1.0002^{+0.0051}_{-0.0048}$	$10^9 A_s$	2.175	$2.17^{+0.11}_{-0.10}$	$D_A(0.57)$	1342.9	$1343^{+14}_{-14}$
$A_{217}^{\text{CIB}}$	69.2	$67^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.9026	$1.902^{+0.023}_{-0.023}$	$F_{\text{AP}}(0.57)$	0.67320	$0.6731^{+0.0035}_{-0.0036}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1212.4	$1212^{+23}_{-22}$	$f\sigma_8(0.57)$	0.4816	$0.481^{+0.010}_{-0.011}$
$A_{143}^{\text{tSZ}}$	6.07	$4.5^{+3.9}_{-3.7}$	$D_{220}$	5715	$5712^{+76}_{-77}$	$\sigma_8(0.57)$	0.6228	$0.623^{+0.015}_{-0.014}$
$A_{100}^{\text{PS}}$	266	$269^{+50}_{-60}$	$D_{810}$	2538.2	$2538^{+27}_{-27}$	$f_{2000}^{143}$	33.4	$33^{+5}_{-5}$
$A_{143}^{\text{PS}}$	44.1	$49^{+20}_{-20}$	$D_{1420}$	812.2	$812.3^{+9.5}_{-9.9}$	$f_{2000}^{143 \times 217}$	35.24	$35.2^{+3.8}_{-3.7}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$D_{2000}$	227.75	$227.8^{+3.3}_{-3.4}$	$f_{2000}^{217}$	108.53	$108.5^{+3.7}_{-3.8}$
$A_{217}^{\text{PS}}$	95.3	$96^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9800	$0.9805^{+0.0087}_{-0.0085}$	$\chi_{\text{lensing}}^2$	9.94	$10.5 (\nu: 1.4)$
$A^{\text{kSZ}}$	2.3	—	$Y_{\text{P}}$	0.250592	$0.25059^{+0.00017}_{-0.00018}$	$\chi_{\text{lowTEB}}^2$	10493.58	$10493.92 (\nu: 0.4)$
$A_{100}^{\text{dustTT}}$	7.58	$7.6^{+3.6}_{-3.8}$	$Y_{\text{P}}^{\text{BBN}}$	0.251938	$0.25193^{+0.00017}_{-0.00018}$	$\chi_{\text{plik}}^2$	769.0	$782.1 (\nu: 15.0)$
$A_{143}^{\text{dustTT}}$	9.19	$9.1^{+3.7}_{-3.8}$	$10^5 \text{D}/\text{H}$	2.705	$2.707^{+0.078}_{-0.073}$	$\chi_{\text{H070p6}}^2$	0.019	$0.044 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.4^{+8.6}_{-8.3}$	$\text{Age}/\text{Gyr}$	13.430	$13.430^{+0.056}_{-0.054}$	$\chi_{\text{JLA}}^2$	706.527	$706.564 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	81.5	$82^{+10}_{-10}$	$z_*$	1090.57	$1090.58^{+0.60}_{-0.58}$	$\chi_{\text{6DF}}^2$	0.008	$0.047 (\nu: 0.0)$
$c_{100}$	0.99791	$0.9979^{+0.0016}_{-0.0016}$	$r_*$	141.30	$141.33^{+0.60}_{-0.58}$	$\chi_{\text{MGS}}^2$	1.97	$2.08 (\nu: 0.2)$
$c_{217}$	0.99621	$0.9962^{+0.0028}_{-0.0029}$	$100\theta_*$	1.04033	$1.04035^{+0.00083}_{-0.00080}$	$\chi_{\text{DR11CMass}}^2$	2.73	$3.18 (\nu: 0.4)$
$H_0$	70.14	$70.2^{+1.1}_{-1.1}$	$D_A/\text{Gpc}$	13.582	$13.585^{+0.058}_{-0.056}$	$\chi_{\text{DR11LOWZ}}^2$	0.130	$0.23 (\nu: 0.0)$
$\Omega_\Lambda$	0.6996	$0.700^{+0.014}_{-0.014}$	$z_{\text{drag}}$	1060.81	$1060.79^{+0.82}_{-0.90}$	$\chi_{\text{prior}}^2$	2.5	$7.6 (\nu: 6.6)$
$\Omega_m$	0.3004	$0.300^{+0.014}_{-0.014}$	$r_{\text{drag}}$	143.88	$143.92^{+0.63}_{-0.62}$	$\chi_{\text{CMB}}^2$	11272.5	$11286.5 (\nu: 14.9)$
$\Omega_m h^2$	0.14780	$0.1477^{+0.0024}_{-0.0024}$	$k_{\text{D}}$	0.14292	$0.14287^{+0.00085}_{-0.00086}$	$\chi_{\text{BAO}}^2$	4.83	$5.5 (\nu: 1.0)$
$\Omega_m h^3$	0.10366	$0.10363^{+0.00093}_{-0.0010}$	$100\theta_{\text{D}}$	0.16184	$0.16187^{+0.00052}_{-0.00049}$			

Best-fit  $\chi_{\text{eff}}^2 = 11986.36$ ;  $\bar{\chi}_{\text{eff}}^2 = 12006.31$ ;  $R - 1 = 0.02151$   
 $\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.97 DR11CMass: 2.73 DR11LOWZ: 0.13 CMB - smica\_g30\_ftl\_full\_pp: 9.94 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.58 plik\_dx11dr2\_HM\_v18\_TT: 768.96 Hubble - H070p6: 0.02 SN - JLA December\_2013: 706.53

# 11.51 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_nnup39\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022587	$0.02258^{+0.00027}_{-0.00027}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.15}_{-0.16}$	$100\theta_*$	1.04011	$1.04013^{+0.00058}_{-0.00057}$
$\Omega_c h^2$	0.12543	$0.1253^{+0.0022}_{-0.0022}$	$A_{217}^{\text{dust}TE}$	1.669	$1.67^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	13.5594	$13.562^{+0.045}_{-0.046}$
$100\theta_{\text{MC}}$	1.04021	$1.04022^{+0.00058}_{-0.00058}$	$c_{100}$	0.99816	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1061.12	$1061.11^{+0.55}_{-0.55}$
$\tau$	0.0905	$0.090^{+0.031}_{-0.032}$	$c_{217}$	0.99612	$0.9961^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	143.578	$143.61^{+0.48}_{-0.49}$
$\ln(10^{10} A_s)$	3.129	$3.128^{+0.062}_{-0.064}$	$H_0$	69.90	$69.94^{+0.98}_{-0.98}$	$k_D$	0.14334	$0.14330^{+0.00058}_{-0.00059}$
$n_s$	0.9795	$0.9795^{+0.0080}_{-0.0080}$	$\Omega_\Lambda$	0.6957	$0.696^{+0.012}_{-0.013}$	$100\theta_D$	0.161635	$0.16165^{+0.00034}_{-0.00033}$
$y_{\text{cal}}$	1.00022	$1.0004^{+0.0047}_{-0.0048}$	$\Omega_m$	0.3043	$0.304^{+0.013}_{-0.012}$	$z_{\text{eq}}$	3361.2	$3358^{+48}_{-47}$
$A_{217}^{\text{CIB}}$	68.5	$66^{+10}_{-10}$	$\Omega_m h^2$	0.14866	$0.1485^{+0.0021}_{-0.0021}$	$k_{\text{eq}}$	0.010524	$0.01052^{+0.00015}_{-0.00015}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m h^3$	0.10391	$0.10388^{+0.00061}_{-0.00060}$	$100\theta_{\text{eq}}$	0.8210	$0.8216^{+0.0092}_{-0.0092}$
$A_{143}^{\text{tSZ}}$	7.14	$5.1^{+3.8}_{-3.8}$	$\sigma_8$	0.8563	$0.855^{+0.026}_{-0.027}$	$100\theta_{s,\text{eq}}$	0.45325	$0.4535^{+0.0047}_{-0.0047}$
$A_{100}^{\text{PS}}$	262	$267^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4723	$0.471^{+0.017}_{-0.017}$	$r_{\text{drag}}/D_V(0.57)$	0.07188	$0.07192^{+0.00073}_{-0.00072}$
$A_{143}^{\text{PS}}$	42.1	$46^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6360	$0.635^{+0.021}_{-0.021}$	$H(0.57)$	95.677	$95.69^{+0.45}_{-0.44}$
$A_{143 \times 217}^{\text{PS}}$	35	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0242	$1.023^{+0.032}_{-0.032}$	$D_A(0.57)$	1345.5	$1345^{+13}_{-12}$
$A_{217}^{\text{PS}}$	97.9	$97^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.507	$2.504^{+0.076}_{-0.077}$	$F_{\text{AP}}(0.57)$	0.67420	$0.6741^{+0.0033}_{-0.0032}$
$A^{\text{kSZ}}$	0.0	—	$z_{\text{re}}$	11.18	$11.1^{+2.8}_{-2.9}$	$f\sigma_8(0.57)$	0.4958	$0.495^{+0.016}_{-0.016}$
$A_{100}^{\text{dust}TT}$	7.56	$7.6^{+3.6}_{-3.7}$	$10^9 A_s$	2.286	$2.28^{+0.14}_{-0.14}$	$\sigma_8(0.57)$	0.6388	$0.638^{+0.020}_{-0.020}$
$A_{143}^{\text{dust}TT}$	9.10	$9.1^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.9078	$1.907^{+0.022}_{-0.022}$	$f_{2000}^{143}$	31.3	$32^{+5}_{-5}$
$A_{143 \times 217}^{\text{dust}TT}$	17.8	$17.2^{+8.2}_{-8.2}$	$D_{40}$	1225.7	$1226^{+25}_{-25}$	$f_{2000}^{143 \times 217}$	33.80	$33.9^{+3.7}_{-3.7}$
$A_{217}^{\text{dust}TT}$	81.8	$82^{+10}_{-10}$	$D_{220}$	5725	$5726^{+75}_{-77}$	$f_{2000}^{217}$	107.20	$107.3^{+3.6}_{-3.6}$
$A_{100}^{\text{dust}EE}$	0.0818	$0.082^{+0.011}_{-0.011}$	$D_{810}$	2540.3	$2540^{+26}_{-26}$	$\chi_{\text{lowTEB}}^2$	10496.13	$10496.6 (\nu: 3.0)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0495	$0.0496^{+0.0098}_{-0.0097}$	$D_{1420}$	813.0	$813.0^{+9.0}_{-9.0}$	$\chi_{\text{plik}}^2$	2437.3	$2455.7 (\nu: 23.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.098	$0.099^{+0.064}_{-0.065}$	$D_{2000}$	228.81	$228.8^{+3.1}_{-3.0}$	$\chi_{6\text{DF}}^2$	0.001	$0.030 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1010	$0.101^{+0.014}_{-0.013}$	$n_{s,0.002}$	0.9795	$0.9795^{+0.0080}_{-0.0080}$	$\chi_{\text{MGS}}^2$	1.61	$1.72 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.221	$0.221^{+0.092}_{-0.091}$	$Y_P$	0.250640	$0.25064^{+0.00012}_{-0.00012}$	$\chi_{\text{DR11CMAS}}^2$	2.48	$2.83 (\nu: 0.1)$
$A_{217}^{\text{dust}EE}$	0.645	$0.64^{+0.25}_{-0.25}$	$Y_P^{\text{BBN}}$	0.251986	$0.25198^{+0.00012}_{-0.00012}$	$\chi_{\text{DR11LOWZ}}^2$	0.33	$0.40 (\nu: 0.1)$
$A_{100}^{\text{dust}TE}$	0.141	$0.140^{+0.074}_{-0.076}$	$10^5 D/H$	2.684	$2.685^{+0.053}_{-0.051}$	$\chi_{\text{prior}}^2$	7.3	$19.9 (\nu: 15.5)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.057}_{-0.057}$	$\text{Age/Gyr}$	13.4284	$13.428^{+0.041}_{-0.041}$	$\chi_{\text{CMB}}^2$	12933.5	$12952.3 (\nu: 21.5)$
$A_{100 \times 217}^{\text{dust}TE}$	0.303	$0.30^{+0.16}_{-0.17}$	$z_*$	1090.494	$1090.49^{+0.47}_{-0.45}$	$\chi_{\text{BAO}}^2$	4.42	$4.98 (\nu: 0.3)$
$A_{143}^{\text{dust}TE}$	0.154	$0.15^{+0.11}_{-0.11}$	$r_*$	141.033	$141.07^{+0.47}_{-0.48}$			

Best-fit  $\chi_{\text{eff}}^2 = 12945.17$ ;  $\bar{\chi}_{\text{eff}}^2 = 12977.16$ ;  $R - 1 = 0.00677$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMAS: 2.48 DR11LOWZ: 0.33 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.12 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2437.34

# 11.52 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_nnup39\_BAO\_post\_lensing\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022590	$0.02257^{+0.00027}_{-0.00027}$	$A_{217}^{\text{dust}TE}$	1.67	$1.67^{+0.50}_{-0.50}$	$z_{\text{drag}}$	1061.08	$1061.06^{+0.59}_{-0.54}$
$\Omega_c h^2$	0.12483	$0.1248^{+0.0022}_{-0.0021}$	$c_{100}$	0.99811	$0.9981^{+0.0016}_{-0.0014}$	$r_{\text{drag}}$	143.723	$143.74^{+0.49}_{-0.45}$
$100\theta_{\text{MC}}$	1.04030	$1.04027^{+0.00061}_{-0.00056}$	$c_{217}$	0.99634	$0.9962^{+0.0027}_{-0.0028}$	$k_D$	0.14318	$0.14316^{+0.00059}_{-0.00058}$
$\tau$	0.0684	$0.068^{+0.024}_{-0.025}$	$H_0$	70.14	$70.11^{+0.94}_{-0.95}$	$100\theta_D$	0.161664	$0.16168^{+0.00033}_{-0.00034}$
$\ln(10^{10} A_s)$	3.0826	$3.082^{+0.044}_{-0.045}$	$\Omega_\Lambda$	0.6990	$0.699^{+0.011}_{-0.012}$	$z_{\text{eq}}$	3347.6	$3348^{+45}_{-49}$
$n_s$	0.9801	$0.9798^{+0.0079}_{-0.0078}$	$\Omega_m$	0.3010	$0.301^{+0.012}_{-0.011}$	$k_{\text{eq}}$	0.010481	$0.01048^{+0.00014}_{-0.00015}$
$y_{\text{cal}}$	0.9999	$1.0001^{+0.0048}_{-0.0052}$	$\Omega_m h^2$	0.14807	$0.1481^{+0.0020}_{-0.0022}$	$100\theta_{\text{eq}}$	0.8236	$0.8236^{+0.0089}_{-0.0090}$
$A_{217}^{\text{CIB}}$	69.7	$67^{+10}_{-10}$	$\Omega_m h^3$	0.10385	$0.10381^{+0.00061}_{-0.00061}$	$100\theta_{s,\text{eq}}$	0.45459	$0.4546^{+0.0046}_{-0.0046}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\sigma_8$	0.8347	$0.835^{+0.017}_{-0.017}$	$r_{\text{drag}}/D_V(0.57)$	0.07208	$0.07207^{+0.00069}_{-0.00070}$
$A_{143}^{\text{tSZ}}$	6.87	$4.9^{+3.9}_{-3.7}$	$\sigma_8 \Omega_m^{0.5}$	0.4579	$0.458^{+0.011}_{-0.012}$	$H(0.57)$	95.768	$95.75^{+0.45}_{-0.43}$
$A_{100}^{\text{PS}}$	265	$270^{+50}_{-60}$	$\sigma_8 \Omega_m^{0.25}$	0.6183	$0.618^{+0.013}_{-0.014}$	$D_A(0.57)$	1342.6	$1343^{+12}_{-12}$
$A_{143}^{\text{PS}}$	42.6	$47^{+20}_{-10}$	$\sigma_8/h^{0.5}$	0.9967	$0.997^{+0.020}_{-0.020}$	$F_{\text{AP}}(0.57)$	0.67334	$0.6734^{+0.0031}_{-0.0030}$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4418	$2.442^{+0.047}_{-0.050}$	$f\sigma_8(0.57)$	0.4824	$0.4825^{+0.0096}_{-0.010}$
$A_{217}^{\text{PS}}$	95.2	$95^{+20}_{-20}$	$z_{\text{re}}$	9.15	$9.1^{+2.1}_{-2.5}$	$\sigma_8(0.57)$	0.6236	$0.623^{+0.014}_{-0.015}$
$A^{\text{kSZ}}$	0.99	—	$10^9 A_s$	2.182	$2.182^{+0.098}_{-0.096}$	$f_{2000}^{143}$	32.3	$33^{+5}_{-5}$
$A_{100}^{\text{dust}TT}$	7.58	$7.6^{+3.7}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.9027	$1.903^{+0.022}_{-0.022}$	$f_{2000}^{143 \times 217}$	34.58	$34.7^{+3.6}_{-3.5}$
$A_{143}^{\text{dust}TT}$	9.28	$9.3^{+3.6}_{-3.6}$	$D_{40}$	1213.1	$1214^{+22}_{-23}$	$f_{2000}^{217}$	107.78	$107.9^{+3.6}_{-3.5}$
$A_{143 \times 217}^{\text{dust}TT}$	18.2	$17.5^{+8.2}_{-8.3}$	$D_{220}$	5721	$5722^{+78}_{-84}$	$\chi^2_{\text{lensing}}$	10.57	11.2 ( $\nu$ : 2.2)
$A_{217}^{\text{dust}TT}$	82.0	$81^{+10}_{-10}$	$D_{810}$	2538.1	$2538^{+28}_{-28}$	$\chi^2_{\text{lowTEB}}$	10493.68	10494.07 ( $\nu$ : 0.4)
$A_{100}^{\text{dust}EE}$	0.0821	$0.082^{+0.011}_{-0.011}$	$D_{1420}$	812.7	$812.7^{+8.9}_{-10}$	$\chi^2_{\text{plik}}$	2441.6	2459.4 ( $\nu$ : 21.9)
$A_{100 \times 143}^{\text{dust}EE}$	0.0499	$0.0498^{+0.0095}_{-0.0098}$	$D_{2000}$	228.19	$228.1^{+2.7}_{-3.1}$	$\chi^2_{\text{H070p6}}$	0.019	0.042 ( $\nu$ : 0.0)
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.098^{+0.063}_{-0.066}$	$n_{s,0.002}$	0.9801	$0.9798^{+0.0079}_{-0.0078}$	$\chi^2_{\text{JLA}}$	706.533	706.568 ( $\nu$ : 0.0)
$A_{143}^{\text{dust}EE}$	0.1012	$0.101^{+0.014}_{-0.013}$	$Y_P$	0.250642	$0.25063^{+0.00012}_{-0.00012}$	$\chi^2_{6\text{DF}}$	0.004	0.031 ( $\nu$ : 0.0)
$A_{143 \times 217}^{\text{dust}EE}$	0.221	$0.221^{+0.095}_{-0.099}$	$Y_P^{\text{BBN}}$	0.251987	$0.25198^{+0.00012}_{-0.00012}$	$\chi^2_{\text{MGS}}$	1.89	1.93 ( $\nu$ : 0.1)
$A_{217}^{\text{dust}EE}$	0.645	$0.64^{+0.25}_{-0.26}$	$10^5 D/H$	2.683	$2.686^{+0.051}_{-0.055}$	$\chi^2_{\text{DR11CMass}}$	2.66	2.94 ( $\nu$ : 0.2)
$A_{100}^{\text{dust}TE}$	0.142	$0.139^{+0.076}_{-0.075}$	Age/Gyr	13.4228	$13.425^{+0.040}_{-0.040}$	$\chi^2_{\text{DR11LOWZ}}$	0.164	0.27 ( $\nu$ : 0.0)
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.134^{+0.060}_{-0.058}$	$z_*$	1090.437	$1090.46^{+0.47}_{-0.46}$	$\chi^2_{\text{prior}}$	7.8	20 ( $\nu$ : 16.2)
$A_{100 \times 217}^{\text{dust}TE}$	0.303	$0.30^{+0.16}_{-0.15}$	$r_*$	141.176	$141.18^{+0.47}_{-0.46}$	$\chi^2_{\text{CMB}}$	12945.9	12964.7 ( $\nu$ : 21.2)
$A_{143}^{\text{dust}TE}$	0.155	$0.16^{+0.11}_{-0.10}$	$100\theta_*$	1.04021	$1.04018^{+0.00057}_{-0.00059}$	$\chi^2_{\text{BAO}}$	4.72	5.17 ( $\nu$ : 0.5)
$A_{143 \times 217}^{\text{dust}TE}$	0.339	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.5719	$13.573^{+0.044}_{-0.043}$			

Best-fit  $\chi^2_{\text{eff}} = 13664.99$ ;  $\bar{\chi}^2_{\text{eff}} = 13696.86$ ;  $R - 1 = 0.04442$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.89 DR11CMass: 2.66 DR11LOWZ: 0.16 CMB - smica\_g30\_ftl\_full\_pp: 10.57 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.68

## 11.53 base\_nnu\_plikHM\_TT\_lowTEB\_nnup57\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022596	$0.02260^{+0.00040}_{-0.00039}$	$\Omega_m h^3$	0.10743	$0.1074^{+0.0010}_{-0.00097}$	$k_D$	0.14431	$0.14432^{+0.00086}_{-0.00085}$
$\Omega_c h^2$	0.12804	$0.1280^{+0.0027}_{-0.0026}$	$\sigma_8$	0.8606	$0.861^{+0.031}_{-0.031}$	$100\theta_D$	0.16218	$0.16218^{+0.00051}_{-0.00051}$
$100\theta_{MC}$	1.04010	$1.04011^{+0.00082}_{-0.00083}$	$\sigma_8 \Omega_m^{0.5}$	0.4713	$0.471^{+0.020}_{-0.020}$	$z_{eq}$	3344	$3343^{+57}_{-56}$
$\tau$	0.0869	$0.087^{+0.036}_{-0.036}$	$\sigma_8 \Omega_m^{0.25}$	0.6369	$0.637^{+0.024}_{-0.024}$	$k_{eq}$	0.010589	$0.01059^{+0.00018}_{-0.00018}$
$\ln(10^{10} A_s)$	3.127	$3.127^{+0.070}_{-0.072}$	$\sigma_8/h^{0.5}$	1.0212	$1.021^{+0.037}_{-0.037}$	$100\theta_{eq}$	0.8243	$0.824^{+0.011}_{-0.011}$
$n_s$	0.9853	$0.9856^{+0.0089}_{-0.0088}$	$\langle d^2 \rangle^{1/2}$	2.488	$2.487^{+0.086}_{-0.088}$	$100\theta_{s,eq}$	0.4550	$0.4550^{+0.0055}_{-0.0055}$
$y_{cal}$	1.00031	$1.0004^{+0.0049}_{-0.0049}$	$z_{re}$	10.94	$10.9^{+3.2}_{-3.3}$	$r_{drag}/D_V(0.57)$	0.07212	$0.07213^{+0.00086}_{-0.00083}$
$A_{217}^{CIB}$	69.4	$67^{+10}_{-10}$	$10^9 A_s$	2.282	$2.28^{+0.16}_{-0.16}$	$H(0.57)$	96.89	$96.90^{+0.59}_{-0.57}$
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.9178	$1.918^{+0.023}_{-0.023}$	$D_A(0.57)$	1326.5	$1326^{+15}_{-15}$
$A_{143}^{tSZ}$	5.54	$4.4^{+3.7}_{-4.1}$	$D_{40}$	1215.5	$1216^{+26}_{-26}$	$F_{AP}(0.57)$	0.67307	$0.6730^{+0.0037}_{-0.0037}$
$A_{100}^{PS}$	270	$271^{+50}_{-60}$	$D_{220}$	5713	$5715^{+79}_{-79}$	$f\sigma_8(0.57)$	0.4971	$0.497^{+0.018}_{-0.018}$
$A_{143}^{PS}$	45.2	$50^{+20}_{-20}$	$D_{810}$	2541.4	$2542^{+27}_{-27}$	$\sigma_8(0.57)$	0.6432	$0.643^{+0.023}_{-0.023}$
$A_{143 \times 217}^{PS}$	33	$40^{+20}_{-20}$	$D_{1420}$	811.1	$811.5^{+9.9}_{-9.7}$	$f_{2000}^{143}$	33.9	$34^{+6}_{-6}$
$A_{217}^{PS}$	94.6	$96^{+20}_{-20}$	$D_{2000}$	227.30	$227.4^{+3.6}_{-3.6}$	$f_{2000}^{143 \times 217}$	35.59	$36^{+4}_{-4}$
$A^{kSZ}$	2.8	—	$n_{s,0.002}$	0.9853	$0.9856^{+0.0089}_{-0.0088}$	$f_{2000}^{217}$	108.87	$108.8^{+3.9}_{-4.0}$
$A_{100}^{dustTT}$	7.49	$7.6^{+3.7}_{-3.7}$	$Y_P$	0.252920	$0.25292^{+0.00018}_{-0.00017}$	$\chi_{lowTEB}^2$	10494.71	$10495.4 (\nu: 2.8)$
$A_{143}^{dustTT}$	9.07	$9.1^{+3.6}_{-3.6}$	$Y_P^{BBN}$	0.254273	$0.25428^{+0.00018}_{-0.00017}$	$\chi_{plik}^2$	769.0	$782.1 (\nu: 16.6)$
$A_{143 \times 217}^{dustTT}$	17.2	$17.3^{+8.2}_{-8.3}$	$10^5 D/H$	2.743	$2.742^{+0.078}_{-0.078}$	$\chi_{6DF}^2$	0.007	$0.049 (\nu: 0.0)$
$A_{217}^{dustTT}$	81.3	$82^{+10}_{-10}$	Age/Gyr	13.270	$13.269^{+0.056}_{-0.056}$	$\chi_{MGS}^2$	1.97	$2.05 (\nu: 0.2)$
$c_{100}$	0.99789	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1090.87	$1090.86^{+0.62}_{-0.62}$	$\chi_{DR11CMass}^2$	2.73	$3.19 (\nu: 0.5)$
$c_{217}$	0.99626	$0.9962^{+0.0029}_{-0.0028}$	$r_*$	139.58	$139.58^{+0.59}_{-0.59}$	$\chi_{DR11LOWZ}^2$	0.134	$0.26 (\nu: 0.1)$
$H_0$	71.02	$71.0^{+1.2}_{-1.2}$	$100\theta_*$	1.03991	$1.03991^{+0.00082}_{-0.00082}$	$\chi_{prior}^2$	2.4	$7.5 (\nu: 6.6)$
$\Omega_\Lambda$	0.7001	$0.700^{+0.014}_{-0.015}$	$D_A/\text{Gpc}$	13.423	$13.423^{+0.057}_{-0.058}$	$\chi_{CMB}^2$	11263.7	$11277.6 (\nu: 15.3)$
$\Omega_m$	0.2999	$0.300^{+0.015}_{-0.014}$	$z_{drag}$	1061.46	$1061.48^{+0.85}_{-0.86}$	$\chi_{BAO}^2$	4.84	$5.6 (\nu: 1.1)$
$\Omega_m h^2$	0.15128	$0.1513^{+0.0026}_{-0.0025}$	$r_{drag}$	142.11	$142.10^{+0.63}_{-0.63}$			

Best-fit  $\chi_{eff}^2 = 11270.95$ ;  $\bar{\chi}_{eff}^2 = 11290.61$ ;  $R - 1 = 0.00564$  $\chi_{eff}^2$ : BAO - 6DF: 0.01 MGS: 1.97 DR11CMass: 2.73 DR11LOWZ: 0.13 CMB - lowL.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.71 plik\_dx11dr2\_HM\_v18.TT: 768.98

# 11.54 base\_nnu\_plikHM\_TT\_lowTEB\_nnup57\_BAO\_post\_lensing\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022551	$0.02257^{+0.00040}_{-0.00040}$	$\sigma_8$	0.8401	$0.841^{+0.019}_{-0.019}$	$z_{\text{eq}}$	3330	$3330^{+52}_{-54}$
$\Omega_c h^2$	0.12747	$0.1274^{+0.0025}_{-0.0026}$	$\sigma_8 \Omega_m^{0.5}$	0.4582	$0.458^{+0.013}_{-0.013}$	$k_{\text{eq}}$	0.010546	$0.01055^{+0.00017}_{-0.00017}$
$100\theta_{\text{MC}}$	1.04011	$1.04015^{+0.00079}_{-0.00075}$	$\sigma_8 \Omega_m^{0.25}$	0.6204	$0.621^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	0.8267	$0.827^{+0.010}_{-0.010}$
$\tau$	0.0663	$0.066^{+0.026}_{-0.026}$	$\sigma_8/h^{0.5}$	0.9958	$0.996^{+0.022}_{-0.022}$	$100\theta_{\text{s,eq}}$	0.4562	$0.4563^{+0.0055}_{-0.0052}$
$\ln(10^{10} A_s)$	3.0833	$3.084^{+0.047}_{-0.049}$	$\langle d^2 \rangle^{1/2}$	2.4288	$2.428^{+0.050}_{-0.048}$	$r_{\text{drag}}/D_V(0.57)$	0.07228	$0.07231^{+0.00083}_{-0.00078}$
$n_s$	0.9852	$0.9857^{+0.0088}_{-0.0088}$	$z_{\text{re}}$	9.03	$9.0^{+2.5}_{-2.5}$	$H(0.57)$	96.91	$96.95^{+0.58}_{-0.59}$
$y_{\text{cal}}$	0.99960	$1.0001^{+0.0049}_{-0.0048}$	$10^9 A_s$	2.183	$2.19^{+0.11}_{-0.11}$	$D_A(0.57)$	1324.9	$1324^{+14}_{-15}$
$A_{217}^{\text{CIB}}$	70.1	$68^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.9121	$1.914^{+0.022}_{-0.022}$	$F_{\text{AP}}(0.57)$	0.67243	$0.6723^{+0.0035}_{-0.0035}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1204.8	$1206^{+23}_{-22}$	$f\sigma_8(0.57)$	0.4845	$0.485^{+0.011}_{-0.011}$
$A_{143}^{\text{tSZ}}$	5.12	$< 7.68$	$D_{220}$	5705	$5711^{+79}_{-76}$	$\sigma_8(0.57)$	0.6285	$0.629^{+0.015}_{-0.015}$
$A_{100}^{\text{PS}}$	273	$275^{+50}_{-60}$	$D_{810}$	2536.9	$2540^{+27}_{-26}$	$f_{2000}^{143}$	35.0	$35^{+6}_{-5}$
$A_{143}^{\text{PS}}$	45.8	$51^{+10}_{-10}$	$D_{1420}$	809.6	$811^{+10}_{-10}$	$f_{2000}^{143 \times 217}$	36.48	$36^{+4}_{-4}$
$A_{143 \times 217}^{\text{PS}}$	32	$40^{+20}_{-20}$	$D_{2000}$	226.22	$226.7^{+3.5}_{-3.6}$	$f_{2000}^{217}$	109.61	$109.5^{+3.9}_{-3.8}$
$A_{217}^{\text{PS}}$	92.6	$95^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9852	$0.9857^{+0.0088}_{-0.0088}$	$\chi^2_{\text{lensing}}$	10.09	$10.8 (\nu: 1.6)$
$A^{\text{kSZ}}$	4.1	—	$Y_{\text{P}}$	0.252900	$0.25291^{+0.00018}_{-0.00018}$	$\chi^2_{\text{lowTEB}}$	10493.06	$10493.42 (\nu: 0.3)$
$A_{100}^{\text{dustTT}}$	7.62	$7.6^{+3.8}_{-3.9}$	$Y_{\text{P}}^{\text{BBN}}$	0.254253	$0.25426^{+0.00018}_{-0.00018}$	$\chi^2_{\text{plik}}$	771.5	$784.5 (\nu: 16.0)$
$A_{143}^{\text{dustTT}}$	9.09	$9.2^{+3.4}_{-3.6}$	$10^5 D/H$	2.752	$2.748^{+0.073}_{-0.077}$	$\chi^2_{\text{H070p6}}$	0.030	$0.064 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.3	$17.7^{+8.3}_{-8.4}$	$\text{Age/Gyr}$	13.272	$13.268^{+0.052}_{-0.055}$	$\chi^2_{\text{JLA}}$	706.502	$706.542 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	81.2	$82^{+10}_{-10}$	$z_*$	1090.88	$1090.86^{+0.59}_{-0.61}$	$\chi^2_{6\text{DF}}$	0.025	$0.067 (\nu: 0.0)$
$c_{100}$	0.99785	$0.9979^{+0.0016}_{-0.0016}$	$r_*$	139.75	$139.74^{+0.54}_{-0.55}$	$\chi^2_{\text{MGS}}$	2.19	$2.30 (\nu: 0.2)$
$c_{217}$	0.99641	$0.9964^{+0.0027}_{-0.0029}$	$100\theta_*$	1.03991	$1.03996^{+0.00078}_{-0.00074}$	$\chi^2_{\text{DR11CMass}}$	3.03	$3.5 (\nu: 0.7)$
$H_0$	71.17	$71.2^{+1.2}_{-1.1}$	$D_A/\text{Gpc}$	13.438	$13.437^{+0.055}_{-0.053}$	$\chi^2_{\text{DR11LOWZ}}$	0.056	$0.17 (\nu: 0.0)$
$\Omega_\Lambda$	0.7026	$0.703^{+0.014}_{-0.014}$	$z_{\text{drag}}$	1061.34	$1061.37^{+0.85}_{-0.79}$	$\chi^2_{\text{prior}}$	3.0	$7.7 (\nu: 6.7)$
$\Omega_m$	0.2974	$0.297^{+0.014}_{-0.014}$	$r_{\text{drag}}$	142.28	$142.27^{+0.61}_{-0.58}$	$\chi^2_{\text{CMB}}$	11274.6	$11288.8 (\nu: 16.5)$
$\Omega_m h^2$	0.15067	$0.1507^{+0.0024}_{-0.0024}$	$k_{\text{D}}$	0.14408	$0.14410^{+0.00085}_{-0.00083}$	$\chi^2_{\text{BAO}}$	5.31	$6.0 (\nu: 1.6)$
$\Omega_m h^3$	0.10724	$0.10730^{+0.00098}_{-0.00093}$	$100\theta_{\text{D}}$	0.16226	$0.16224^{+0.00049}_{-0.00051}$			

Best-fit  $\chi^2_{\text{eff}} = 11989.40$ ;  $\bar{\chi}^2_{\text{eff}} = 12009.13$ ;  $R - 1 = 0.02505$   
 $\chi^2_{\text{eff}}$ : BAO - 6DF: 0.03 MGS: 2.19 DR11CMass: 3.03 DR11LOWZ: 0.06 CMB - smica\_g30\_ftl\_full\_pp: 10.09 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.06  
plik\_dx11dr2\_HM\_v18\_TT: 771.46 Hubble - H070p6: 0.03 SN - JLA December\_2013: 706.50



# 11.55 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_nnup57\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022708	$0.02271^{+0.00028}_{-0.00028}$	$A_{143 \times 217}^{\text{dust}TE}$	0.338	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.03973	$1.03973^{+0.00058}_{-0.00059}$
$\Omega_c h^2$	0.12815	$0.1282^{+0.0022}_{-0.0023}$	$A_{217}^{\text{dust}TE}$	1.67	$1.67^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	13.4146	$13.415^{+0.046}_{-0.044}$
$100\theta_{\text{MC}}$	1.03994	$1.03994^{+0.00058}_{-0.00059}$	$c_{100}$	0.99813	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1061.73	$1061.73^{+0.57}_{-0.56}$
$\tau$	0.0919	$0.092^{+0.032}_{-0.033}$	$c_{217}$	0.99623	$0.9962^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	141.960	$141.96^{+0.49}_{-0.48}$
$\ln(10^{10} A_s)$	3.138	$3.139^{+0.062}_{-0.064}$	$H_0$	71.02	$71.0^{+1.0}_{-0.97}$	$k_D$	0.14456	$0.14457^{+0.00060}_{-0.00061}$
$n_s$	0.9855	$0.9853^{+0.0082}_{-0.0079}$	$\Omega_\Lambda$	0.6996	$0.700^{+0.012}_{-0.012}$	$100\theta_D$	0.162000	$0.16200^{+0.00035}_{-0.00034}$
$y_{\text{cal}}$	1.00028	$1.0004^{+0.0048}_{-0.0048}$	$\Omega_m$	0.3004	$0.300^{+0.012}_{-0.012}$	$z_{\text{eq}}$	3348.7	$3349^{+47}_{-48}$
$A_{217}^{\text{CIB}}$	69.5	$66^{+10}_{-10}$	$\Omega_m h^2$	0.15150	$0.1515^{+0.0021}_{-0.0022}$	$k_{\text{eq}}$	0.010604	$0.01060^{+0.00015}_{-0.00015}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m h^3$	0.10759	$0.10759^{+0.00064}_{-0.00064}$	$100\theta_{\text{eq}}$	0.8236	$0.8236^{+0.0094}_{-0.0089}$
$A_{143}^{\text{tSZ}}$	6.79	$4.8^{+3.8}_{-3.8}$	$\sigma_8$	0.8650	$0.865^{+0.027}_{-0.027}$	$100\theta_{s,\text{eq}}$	0.45449	$0.4545^{+0.0048}_{-0.0046}$
$A_{100}^{\text{PS}}$	266	$270^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4741	$0.474^{+0.017}_{-0.017}$	$r_{\text{drag}}/D_V(0.57)$	0.07206	$0.07206^{+0.00074}_{-0.00070}$
$A_{143}^{\text{PS}}$	43.7	$48^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6404	$0.641^{+0.020}_{-0.021}$	$H(0.57)$	96.922	$96.92^{+0.48}_{-0.45}$
$A_{143 \times 217}^{\text{PS}}$	34.9	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0265	$1.027^{+0.032}_{-0.032}$	$D_A(0.57)$	1326.3	$1326^{+12}_{-12}$
$A_{217}^{\text{PS}}$	96.7	$96^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.502	$2.503^{+0.075}_{-0.076}$	$F_{\text{AP}}(0.57)$	0.67319	$0.6732^{+0.0032}_{-0.0032}$
$A^{\text{kSZ}}$	0.9	—	$z_{\text{re}}$	11.35	$11.3^{+2.6}_{-3.0}$	$f\sigma_8(0.57)$	0.4998	$0.500^{+0.016}_{-0.016}$
$A_{100}^{\text{dust}TT}$	7.62	$7.6^{+3.6}_{-3.6}$	$10^9 A_s$	2.306	$2.31^{+0.15}_{-0.14}$	$\sigma_8(0.57)$	0.6464	$0.647^{+0.020}_{-0.020}$
$A_{143}^{\text{dust}TT}$	9.19	$9.1^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.9190	$1.919^{+0.022}_{-0.022}$	$f_{2000}^{143}$	32.6	$33^{+5}_{-5}$
$A_{143 \times 217}^{\text{dust}TT}$	17.9	$17.4^{+8.1}_{-8.3}$	$D_{40}$	1218.7	$1220^{+25}_{-24}$	$f_{2000}^{143 \times 217}$	34.84	$34.8^{+3.7}_{-3.7}$
$A_{217}^{\text{dust}TT}$	81.7	$82^{+10}_{-10}$	$D_{220}$	5723	$5726^{+77}_{-76}$	$f_{2000}^{217}$	108.11	$108.2^{+3.7}_{-3.6}$
$A_{100}^{\text{dust}EE}$	0.0822	$0.082^{+0.011}_{-0.011}$	$D_{810}$	2542.5	$2543^{+27}_{-26}$	$\chi_{\text{lowTEB}}^2$	10495.45	$10496.1 (\nu: 3.0)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0498	$0.0498^{+0.0098}_{-0.0097}$	$D_{1420}$	812.0	$812.0^{+9.5}_{-9.0}$	$\chi_{\text{plik}}^2$	2442.3	$2460.7 (\nu: 24.6)$
$A_{100 \times 217}^{\text{dust}EE}$	0.098	$0.098^{+0.064}_{-0.064}$	$D_{2000}$	227.89	$227.9^{+3.1}_{-3.0}$	$\chi_{6\text{DF}}^2$	0.004	$0.035 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1012	$0.101^{+0.013}_{-0.013}$	$n_{s,0.002}$	0.9855	$0.9853^{+0.0082}_{-0.0079}$	$\chi_{\text{MGS}}^2$	1.89	$1.95 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.219	$0.219^{+0.092}_{-0.092}$	$Y_P$	0.252969	$0.25297^{+0.00012}_{-0.00012}$	$\chi_{\text{DR11CMAS}}^2$	2.66	$2.99 (\nu: 0.2)$
$A_{217}^{\text{dust}EE}$	0.642	$0.64^{+0.25}_{-0.25}$	$Y_P^{\text{BBN}}$	0.254322	$0.25432^{+0.00012}_{-0.00012}$	$\chi_{\text{DR11LOWZ}}^2$	0.168	$0.27 (\nu: 0.0)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.074}_{-0.075}$	$10^5 D/H$	2.722	$2.722^{+0.054}_{-0.053}$	$\chi_{\text{prior}}^2$	7.8	$20 (\nu: 15.8)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.058}_{-0.057}$	$\text{Age}/\text{Gyr}$	13.2642	$13.264^{+0.040}_{-0.041}$	$\chi_{\text{CMB}}^2$	12937.7	$12956.8 (\nu: 22.9)$
$A_{100 \times 217}^{\text{dust}TE}$	0.301	$0.30^{+0.17}_{-0.17}$	$z_*$	1090.739	$1090.74^{+0.49}_{-0.47}$	$\chi_{\text{BAO}}^2$	4.73	$5.3 (\nu: 0.6)$
$A_{143}^{\text{dust}TE}$	0.153	$0.15^{+0.11}_{-0.10}$	$r_*$	139.476	$139.47^{+0.48}_{-0.47}$			

Best-fit  $\chi_{\text{eff}}^2 = 12950.22$ ;  $\bar{\chi}_{\text{eff}}^2 = 12982.18$ ;  $R - 1 = 0.00793$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.89 DR11CMAS: 2.66 DR11LOWZ: 0.17 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.45 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2442.26

# 11.56 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_nnup57\_BAO\_post\_lensing\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022706	$0.02269^{+0.00026}_{-0.00027}$	$A_{217}^{\text{dust}TE}$	1.663	$1.67^{+0.47}_{-0.48}$	$z_{\text{drag}}$	1061.69	$1061.66^{+0.56}_{-0.57}$
$\Omega_c h^2$	0.12752	$0.1277^{+0.0022}_{-0.0021}$	$c_{100}$	0.99805	$0.9980^{+0.0016}_{-0.0016}$	$r_{\text{drag}}$	142.113	$142.08^{+0.44}_{-0.45}$
$100\theta_{\text{MC}}$	1.04002	$1.04001^{+0.00055}_{-0.00056}$	$c_{217}$	0.99640	$0.9964^{+0.0028}_{-0.0030}$	$k_D$	0.14439	$0.14441^{+0.00059}_{-0.00056}$
$\tau$	0.0691	$0.068^{+0.024}_{-0.023}$	$H_0$	71.27	$71.2^{+1.0}_{-0.97}$	$100\theta_D$	0.162035	$0.16205^{+0.00033}_{-0.00033}$
$\ln(10^{10} A_s)$	3.0900	$3.088^{+0.045}_{-0.044}$	$\Omega_\Lambda$	0.7029	$0.702^{+0.012}_{-0.012}$	$z_{\text{eq}}$	3334.7	$3339^{+46}_{-44}$
$n_s$	0.9857	$0.9854^{+0.0074}_{-0.0076}$	$\Omega_m$	0.2971	$0.298^{+0.012}_{-0.012}$	$k_{\text{eq}}$	0.010560	$0.01057^{+0.00015}_{-0.00014}$
$y_{\text{cal}}$	1.00008	$0.9999^{+0.0045}_{-0.0044}$	$\Omega_m h^2$	0.15087	$0.1511^{+0.0021}_{-0.0020}$	$100\theta_{\text{eq}}$	0.8262	$0.8254^{+0.0087}_{-0.0089}$
$A_{217}^{\text{CIB}}$	70.5	$68^{+10}_{-10}$	$\Omega_m h^3$	0.10752	$0.10751^{+0.00066}_{-0.00059}$	$100\theta_{s,\text{eq}}$	0.45587	$0.4555^{+0.0045}_{-0.0045}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\sigma_8$	0.8426	$0.843^{+0.018}_{-0.017}$	$r_{\text{drag}}/D_V(0.57)$	0.07227	$0.07220^{+0.00073}_{-0.00069}$
$A_{143}^{\text{tSZ}}$	5.77	$4.6^{+3.9}_{-3.7}$	$\sigma_8 \Omega_m^{0.5}$	0.4592	$0.460^{+0.012}_{-0.012}$	$H(0.57)$	97.010	$96.97^{+0.48}_{-0.44}$
$A_{100}^{\text{PS}}$	273	$275^{+50}_{-60}$	$\sigma_8 \Omega_m^{0.25}$	0.6220	$0.623^{+0.013}_{-0.013}$	$D_A(0.57)$	1323.4	$1324^{+12}_{-13}$
$A_{143}^{\text{PS}}$	43.8	$49^{+10}_{-20}$	$\sigma_8/h^{0.5}$	0.9981	$0.999^{+0.020}_{-0.020}$	$F_{\text{AP}}(0.57)$	0.67233	$0.6726^{+0.0032}_{-0.0031}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4355	$2.436^{+0.047}_{-0.051}$	$f\sigma_8(0.57)$	0.4858	$0.4861^{+0.0099}_{-0.0096}$
$A_{217}^{\text{PS}}$	92.2	$94^{+20}_{-20}$	$z_{\text{re}}$	9.26	$9.1^{+2.4}_{-2.2}$	$\sigma_8(0.57)$	0.6305	$0.630^{+0.015}_{-0.013}$
$A^{\text{kSZ}}$	3.2	—	$10^9 A_s$	2.198	$2.19^{+0.10}_{-0.095}$	$f_{2000}^{143}$	33.9	$34^{+5}_{-5}$
$A_{100}^{\text{dust}TT}$	7.70	$7.8^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.9142	$1.915^{+0.020}_{-0.020}$	$f_{2000}^{143 \times 217}$	35.68	$35.7^{+3.5}_{-3.4}$
$A_{143}^{\text{dust}TT}$	9.34	$9.4^{+3.5}_{-3.5}$	$D_{40}$	1207.0	$1207^{+21}_{-21}$	$f_{2000}^{217}$	108.86	$108.8^{+3.5}_{-3.7}$
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.7^{+7.9}_{-8.1}$	$D_{220}$	5721	$5719^{+73}_{-73}$	$\chi^2_{\text{lensing}}$	10.82	$11.6 (\nu: 2.5)$
$A_{217}^{\text{dust}TT}$	81.2	$81^{+10}_{-10}$	$D_{810}$	2540.3	$2540^{+25}_{-24}$	$\chi^2_{\text{lowTEB}}$	10493.13	$10493.51 (\nu: 0.3)$
$A_{100}^{\text{dust}EE}$	0.0823	$0.082^{+0.012}_{-0.011}$	$D_{1420}$	811.5	$811.4^{+8.6}_{-8.5}$	$\chi^2_{\text{plik}}$	2446.7	$2464.7 (\nu: 22.9)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0500	$0.0502^{+0.0099}_{-0.0095}$	$D_{2000}$	227.15	$227.1^{+2.9}_{-2.9}$	$\chi^2_{\text{H070p6}}$	0.040	$0.052 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.098	$0.097^{+0.064}_{-0.062}$	$n_{s,0.002}$	0.9857	$0.9854^{+0.0074}_{-0.0076}$	$\chi^2_{\text{JLA}}$	706.500	$706.539 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1014	$0.101^{+0.013}_{-0.013}$	$Y_P$	0.252968	$0.25296^{+0.00012}_{-0.00012}$	$\chi^2_{6\text{DF}}$	0.025	$0.045 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dust}EE}$	0.220	$0.219^{+0.085}_{-0.091}$	$Y_P^{\text{BBN}}$	0.254321	$0.25431^{+0.00012}_{-0.00012}$	$\chi^2_{\text{MGS}}$	2.19	$2.15 (\nu: 0.1)$
$A_{217}^{\text{dust}EE}$	0.642	$0.64^{+0.24}_{-0.23}$	$10^5 D/H$	2.722	$2.725^{+0.052}_{-0.050}$	$\chi^2_{\text{DR11CMass}}$	3.03	$3.19 (\nu: 0.4)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.074}_{-0.073}$	$\text{Age/Gyr}$	13.2593	$13.262^{+0.038}_{-0.039}$	$\chi^2_{\text{DR11LOWZ}}$	0.057	$0.18 (\nu: 0.0)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.057}_{-0.056}$	$z_*$	1090.689	$1090.73^{+0.46}_{-0.48}$	$\chi^2_{\text{prior}}$	8.4	$20 (\nu: 15.5)$
$A_{100 \times 217}^{\text{dust}TE}$	0.301	$0.30^{+0.16}_{-0.16}$	$r_*$	139.625	$139.59^{+0.41}_{-0.45}$	$\chi^2_{\text{CMB}}$	12950.6	$12969.9 (\nu: 22.2)$
$A_{143}^{\text{dust}TE}$	0.155	$0.16^{+0.11}_{-0.11}$	$100\theta_*$	1.03982	$1.03980^{+0.00054}_{-0.00055}$	$\chi^2_{\text{BAO}}$	5.31	$5.6 (\nu: 0.8)$
$A_{143 \times 217}^{\text{dust}TE}$	0.334	$0.34^{+0.15}_{-0.16}$	$D_A/\text{Gpc}$	13.4278	$13.425^{+0.041}_{-0.042}$			

Best-fit  $\chi^2_{\text{eff}} = 13670.90$ ;  $\bar{\chi}^2_{\text{eff}} = 13702.08$ ;  $R - 1 = 0.08207$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.03 MGS: 2.19 DR11CMass: 3.03 DR11LOWZ: 0.06 CMB - smica\_g30\_ftl\_full\_pp: 10.82 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.13

**11.57 base\_nnu\_plikHM\_TT\_lowTEB\_nnup39\_lensing**

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022610	$0.02263^{+0.00046}_{-0.00045}$	$\Omega_m h^2$	0.14599	$0.1459^{+0.0039}_{-0.0039}$	$z_{\text{drag}}$	1061.00	$1061.03^{+0.89}_{-0.90}$
$\Omega_c h^2$	0.12274	$0.1226^{+0.0041}_{-0.0042}$	$\Omega_m h^3$	0.10368	$0.10371^{+0.00094}_{-0.00092}$	$r_{\text{drag}}$	144.22	$144.24^{+0.85}_{-0.86}$
$100\theta_{\text{MC}}$	1.04064	$1.04068^{+0.00091}_{-0.00087}$	$\sigma_8$	0.8370	$0.836^{+0.020}_{-0.019}$	$k_{\text{D}}$	0.14265	$0.14264^{+0.00097}_{-0.00094}$
$\tau$	0.0802	$0.079^{+0.035}_{-0.034}$	$\sigma_8 \Omega_m^{0.5}$	0.4503	$0.449^{+0.017}_{-0.017}$	$100\theta_{\text{D}}$	0.16176	$0.16174^{+0.00051}_{-0.00052}$
$\ln(10^{10} A_s)$	3.101	$3.100^{+0.062}_{-0.060}$	$\sigma_8 \Omega_m^{0.25}$	0.6139	$0.613^{+0.015}_{-0.015}$	$z_{\text{eq}}$	3300	$3297^{+89}_{-90}$
$n_s$	0.9848	$0.985^{+0.012}_{-0.012}$	$\sigma_8/h^{0.5}$	0.9932	$0.992^{+0.022}_{-0.022}$	$k_{\text{eq}}$	0.010334	$0.01032^{+0.00028}_{-0.00028}$
$y_{\text{cal}}$	0.99967	$1.0003^{+0.0047}_{-0.0047}$	$\langle d^2 \rangle^{1/2}$	2.434	$2.430^{+0.050}_{-0.050}$	$100\theta_{\text{eq}}$	0.8327	$0.833^{+0.018}_{-0.017}$
$A_{217}^{\text{CIB}}$	69.7	$66^{+10}_{-10}$	$z_{\text{re}}$	10.20	$10.1^{+2.9}_{-3.2}$	$100\theta_{\text{s,eq}}$	0.4593	$0.4597^{+0.0093}_{-0.0088}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.221	$2.22^{+0.14}_{-0.13}$	$r_{\text{drag}}/D_V(0.57)$	0.07280	$0.0729^{+0.0015}_{-0.0014}$
$A_{143}^{\text{tSZ}}$	6.14	$4.7^{+3.9}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8922	$1.894^{+0.026}_{-0.026}$	$H(0.57)$	96.10	$96.16^{+0.93}_{-0.85}$
$A_{100}^{\text{PS}}$	264	$267^{+50}_{-50}$	$D_{40}$	1205.9	$1207^{+24}_{-23}$	$D_A(0.57)$	1331.9	$1331^{+23}_{-24}$
$A_{143}^{\text{PS}}$	42.4	$47^{+20}_{-20}$	$D_{220}$	5715	$5724^{+78}_{-79}$	$F_{\text{AP}}(0.57)$	0.6703	$0.6701^{+0.0060}_{-0.0060}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$D_{810}$	2533.5	$2537^{+26}_{-26}$	$f\sigma_8(0.57)$	0.4804	$0.480^{+0.011}_{-0.011}$
$A_{217}^{\text{PS}}$	93.8	$96^{+20}_{-20}$	$D_{1420}$	812.1	$813.5^{+9.6}_{-9.6}$	$\sigma_8(0.57)$	0.6283	$0.628^{+0.018}_{-0.018}$
$A^{\text{kSZ}}$	2.1	—	$D_{2000}$	228.12	$228.6^{+3.5}_{-3.5}$	$f_{2000}^{143}$	32.6	$33^{+6}_{-6}$
$A_{100}^{\text{dust}TT}$	7.58	$7.5^{+3.7}_{-3.7}$	$n_{\text{s},0.002}$	0.9848	$0.985^{+0.012}_{-0.012}$	$f_{2000}^{143 \times 217}$	34.47	$34^{+4}_{-4}$
$A_{143}^{\text{dust}TT}$	9.19	$9.1^{+3.6}_{-3.6}$	$Y_{\text{P}}$	0.250650	$0.25066^{+0.00020}_{-0.00020}$	$f_{2000}^{217}$	107.84	$107.8^{+4.0}_{-4.0}$
$A_{143 \times 217}^{\text{dust}TT}$	17.1	$17.3^{+8.2}_{-8.0}$	$Y_{\text{P}}^{\text{BBN}}$	0.251996	$0.25201^{+0.00020}_{-0.00020}$	$\chi_{\text{lensing}}^2$	9.48	$10.1 (\nu: 1.1)$
$A_{217}^{\text{dust}TT}$	80.1	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	2.679	$2.676^{+0.088}_{-0.085}$	$\chi_{\text{lowTEB}}^2$	10493.71	$10494.2 (\nu: 1.0)$
$c_{100}$	0.99786	$0.9979^{+0.0015}_{-0.0015}$	$\text{Age}/\text{Gyr}$	13.402	$13.398^{+0.073}_{-0.076}$	$\chi_{\text{plik}}^2$	768.4	$782.0 (\nu: 15.3)$
$c_{217}$	0.99616	$0.9962^{+0.0029}_{-0.0029}$	$z_*$	1090.23	$1090.20^{+0.83}_{-0.83}$	$\chi_{\text{prior}}^2$	2.6	$7.5 (\nu: 6.6)$
$H_0$	71.02	$71.1^{+2.0}_{-1.9}$	$r_*$	141.67	$141.70^{+0.87}_{-0.87}$	$\chi_{\text{CMB}}^2$	11271.6	$11286.3 (\nu: 15.3)$
$\Omega_{\Lambda}$	0.7106	$0.711^{+0.023}_{-0.023}$	$100\theta_*$	1.04056	$1.04059^{+0.00090}_{-0.00086}$			
$\Omega_{\text{m}}$	0.2894	$0.289^{+0.023}_{-0.023}$	$D_A/\text{Gpc}$	13.615	$13.617^{+0.081}_{-0.081}$			

 Best-fit  $\chi_{\text{eff}}^2 = 11274.19$ ;  $\bar{\chi}_{\text{eff}}^2 = 11293.84$ ;  $R - 1 = 0.00691$ 
 $\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.48 lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10493.71 plik\_dx11dr2\_HM\_v18\_TT: 768.42

# 11.58 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_nnup39\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022623	$0.02261^{+0.00032}_{-0.00032}$	$A_{143}^{\text{dust}TE}$	0.155	$0.16^{+0.11}_{-0.10}$	$z_*$	1090.35	$1090.37^{+0.60}_{-0.59}$
$\Omega_c h^2$	0.12424	$0.1243^{+0.0030}_{-0.0029}$	$A_{143 \times 217}^{\text{dust}TE}$	0.335	$0.34^{+0.16}_{-0.16}$	$r_*$	141.29	$141.28^{+0.60}_{-0.61}$
$100\theta_{\text{MC}}$	1.04035	$1.04033^{+0.00062}_{-0.00063}$	$A_{217}^{\text{dust}TE}$	1.65	$1.66^{+0.50}_{-0.50}$	$100\theta_*$	1.04026	$1.04025^{+0.00061}_{-0.00062}$
$\tau$	0.0716	$0.071^{+0.028}_{-0.028}$	$c_{100}$	0.99812	$0.9981^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.583	$13.582^{+0.056}_{-0.056}$
$\ln(10^{10} A_s)$	3.088	$3.087^{+0.051}_{-0.052}$	$c_{217}$	0.99623	$0.9962^{+0.0029}_{-0.0028}$	$z_{\text{drag}}$	1061.12	$1061.11^{+0.63}_{-0.59}$
$n_s$	0.9817	$0.9810^{+0.0096}_{-0.0097}$	$H_0$	70.39	$70.4^{+1.3}_{-1.4}$	$r_{\text{drag}}$	143.83	$143.82^{+0.58}_{-0.58}$
$y_{\text{cal}}$	0.99992	$1.0001^{+0.0048}_{-0.0048}$	$\Omega_\Lambda$	0.7023	$0.702^{+0.016}_{-0.017}$	$k_D$	0.14309	$0.14309^{+0.00064}_{-0.00063}$
$A_{217}^{\text{CIB}}$	69.2	$67^{+10}_{-10}$	$\Omega_m$	0.2977	$0.298^{+0.017}_{-0.016}$	$100\theta_D$	0.161645	$0.16166^{+0.00035}_{-0.00036}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m h^2$	0.14751	$0.1476^{+0.0029}_{-0.0027}$	$z_{\text{eq}}$	3335	$3337^{+65}_{-62}$
$A_{143}^{\text{tSZ}}$	6.95	$4.9^{+3.8}_{-3.8}$	$\Omega_m h^3$	0.10384	$0.10382^{+0.00065}_{-0.00063}$	$k_{\text{eq}}$	0.010442	$0.01045^{+0.00020}_{-0.00019}$
$A_{100}^{\text{PS}}$	265	$269^{+50}_{-50}$	$\sigma_8$	0.8354	$0.835^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	0.8261	$0.826^{+0.012}_{-0.013}$
$A_{143}^{\text{PS}}$	42.3	$47^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4558	$0.456^{+0.014}_{-0.013}$	$100\theta_{s,\text{eq}}$	0.4558	$0.4557^{+0.0063}_{-0.0064}$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6170	$0.617^{+0.014}_{-0.013}$	$r_{\text{drag}}/D_V(0.57)$	0.07227	$0.07225^{+0.00099}_{-0.00099}$
$A_{217}^{\text{PS}}$	95.8	$95^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9956	$0.996^{+0.021}_{-0.020}$	$H(0.57)$	95.87	$95.85^{+0.61}_{-0.59}$
$A^{\text{kSZ}}$	0.8	—	$\langle d^2 \rangle^{1/2}$	2.4389	$2.440^{+0.049}_{-0.047}$	$D_A(0.57)$	1339.4	$1340^{+17}_{-17}$
$A_{100}^{\text{dust}TT}$	7.61	$7.6^{+3.7}_{-3.6}$	$z_{\text{re}}$	9.43	$9.3^{+2.6}_{-2.7}$	$F_{\text{AP}}(0.57)$	0.67249	$0.6726^{+0.0045}_{-0.0042}$
$A_{143}^{\text{dust}TT}$	9.35	$9.3^{+3.6}_{-3.6}$	$10^9 A_s$	2.193	$2.19^{+0.11}_{-0.11}$	$f\sigma_8(0.57)$	0.4819	$0.482^{+0.010}_{-0.0099}$
$A_{143 \times 217}^{\text{dust}TT}$	18.3	$17.5^{+8.2}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.9002	$1.901^{+0.023}_{-0.024}$	$\sigma_8(0.57)$	0.6249	$0.625^{+0.015}_{-0.015}$
$A_{217}^{\text{dust}TT}$	82.2	$81^{+10}_{-10}$	$D_{40}$	1210.6	$1213^{+23}_{-22}$	$f_{2000}^{143}$	32.0	$32^{+5}_{-5}$
$A_{100}^{\text{dust}EE}$	0.0823	$0.082^{+0.011}_{-0.011}$	$D_{220}$	5721	$5725^{+76}_{-76}$	$f_{2000}^{143 \times 217}$	34.33	$34.5^{+3.7}_{-3.7}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0501	$0.0500^{+0.0098}_{-0.0098}$	$D_{810}$	2537.5	$2538^{+26}_{-26}$	$f_{2000}^{217}$	107.58	$107.8^{+3.7}_{-3.6}$
$A_{100 \times 217}^{\text{dust}EE}$	0.102	$0.099^{+0.064}_{-0.064}$	$D_{1420}$	813.1	$813.0^{+9.4}_{-9.3}$	$\chi_{\text{lensing}}^2$	10.29	$11.0 (\nu: 2.1)$
$A_{143}^{\text{dust}EE}$	0.1016	$0.101^{+0.013}_{-0.013}$	$D_{2000}$	228.38	$228.3^{+3.1}_{-3.1}$	$\chi_{\text{lowTEB}}^2$	10493.57	$10494.15 (\nu: 0.5)$
$A_{143 \times 217}^{\text{dust}EE}$	0.227	$0.222^{+0.091}_{-0.091}$	$n_{s,0.002}$	0.9817	$0.9810^{+0.0096}_{-0.0097}$	$\chi_{\text{plik}}^2$	2442.1	$2460.3 (\nu: 24.1)$
$A_{217}^{\text{dust}EE}$	0.648	$0.65^{+0.26}_{-0.26}$	$Y_P$	0.250656	$0.25065^{+0.00014}_{-0.00014}$	$\chi_{\text{prior}}^2$	7.7	$20 (\nu: 15.9)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.074}_{-0.074}$	$Y_P^{\text{BBN}}$	0.252002	$0.25200^{+0.00014}_{-0.00014}$	$\chi_{\text{CMB}}^2$	12945.9	$12965.4 (\nu: 22.9)$
$A_{100 \times 143}^{\text{dust}TE}$	0.133	$0.132^{+0.057}_{-0.057}$	$10^5 \text{D/H}$	2.677	$2.679^{+0.061}_{-0.060}$			
$A_{100 \times 217}^{\text{dust}TE}$	0.298	$0.30^{+0.17}_{-0.16}$	Age/Gyr	13.416	$13.417^{+0.051}_{-0.052}$			

Best-fit  $\chi_{\text{eff}}^2 = 12953.61$ ;  $\bar{\chi}_{\text{eff}}^2 = 12985.61$ ;  $R - 1 = 0.00787$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 10.29 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.57 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2442.06

### 11.59 base\_nnu\_plikHM\_TT\_lowTEB\_nnup57\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022761	$0.02278^{+0.00047}_{-0.00048}$	$\Omega_m h^2$	0.14828	$0.1479^{+0.0042}_{-0.0041}$	$z_{\text{drag}}$	1061.61	$1061.63^{+0.89}_{-0.93}$
$\Omega_c h^2$	0.12487	$0.1245^{+0.0045}_{-0.0044}$	$\Omega_m h^3$	0.10737	$0.10735^{+0.00098}_{-0.00098}$	$r_{\text{drag}}$	142.69	$142.77^{+0.85}_{-0.87}$
$100\theta_{\text{MC}}$	1.04049	$1.04052^{+0.00094}_{-0.00091}$	$\sigma_8$	0.8447	$0.846^{+0.019}_{-0.020}$	$k_{\text{D}}$	0.14378	$0.14371^{+0.00098}_{-0.00096}$
$\tau$	0.0822	$0.085^{+0.035}_{-0.035}$	$\sigma_8 \Omega_m^{0.5}$	0.4492	$0.448^{+0.018}_{-0.018}$	$100\theta_{\text{D}}$	0.16211	$0.16211^{+0.00053}_{-0.00051}$
$\ln(10^{10} A_s)$	3.110	$3.116^{+0.063}_{-0.062}$	$\sigma_8 \Omega_m^{0.25}$	0.6160	$0.616^{+0.016}_{-0.016}$	$z_{\text{eq}}$	3277	$3270^{+93}_{-92}$
$n_s$	0.9926	$0.993^{+0.013}_{-0.012}$	$\sigma_8/h^{0.5}$	0.9927	$0.993^{+0.022}_{-0.022}$	$k_{\text{eq}}$	0.010378	$0.01035^{+0.00030}_{-0.00029}$
$y_{\text{cal}}$	0.99988	$1.0003^{+0.0049}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.420	$2.423^{+0.051}_{-0.051}$	$100\theta_{\text{eq}}$	0.8376	$0.839^{+0.019}_{-0.019}$
$A_{217}^{\text{CIB}}$	68.9	$67^{+10}_{-10}$	$z_{\text{re}}$	10.40	$10.6^{+3.0}_{-3.1}$	$100\theta_{\text{s,eq}}$	0.4617	$0.4626^{+0.0097}_{-0.0095}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.03	—	$10^9 A_s$	2.243	$2.26^{+0.14}_{-0.14}$	$r_{\text{drag}}/D_V(0.57)$	0.07318	$0.0733^{+0.0016}_{-0.0015}$
$A_{143}^{\text{tSZ}}$	6.22	$4.5^{+3.8}_{-4.1}$	$10^9 A_s e^{-2\tau}$	1.9027	$1.903^{+0.028}_{-0.027}$	$H(0.57)$	97.47	$97.5^{+1.0}_{-0.95}$
$A_{100}^{\text{PS}}$	264	$271^{+50}_{-60}$	$D_{40}$	1196.0	$1198^{+25}_{-24}$	$D_A(0.57)$	1309.8	$1308^{+25}_{-25}$
$A_{143}^{\text{PS}}$	44.6	$49^{+20}_{-20}$	$D_{220}$	5716	$5724^{+82}_{-80}$	$F_{\text{AP}}(0.57)$	0.6686	$0.6681^{+0.0064}_{-0.0062}$
$A_{143 \times 217}^{\text{PS}}$	35	$39^{+20}_{-20}$	$D_{810}$	2537.8	$2539^{+27}_{-26}$	$f\sigma_8(0.57)$	0.4828	$0.483^{+0.011}_{-0.011}$
$A_{217}^{\text{PS}}$	96.2	$95^{+20}_{-20}$	$D_{1420}$	812.5	$812.7^{+9.6}_{-9.6}$	$\sigma_8(0.57)$	0.6359	$0.637^{+0.018}_{-0.018}$
$A^{\text{kSZ}}$	1.9	—	$D_{2000}$	227.65	$227.7^{+3.6}_{-3.5}$	$f_{2000}^{143}$	33.2	$34^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.62	$7.6^{+3.7}_{-3.7}$	$n_{\text{s},0.002}$	0.9926	$0.993^{+0.013}_{-0.012}$	$f_{2000}^{143 \times 217}$	35.19	$35^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.17	$9.2^{+3.6}_{-3.6}$	$Y_{\text{P}}$	0.252992	$0.25300^{+0.00021}_{-0.00021}$	$f_{2000}^{217}$	108.46	$108.5^{+4.0}_{-4.0}$
$A_{143 \times 217}^{\text{dustTT}}$	17.9	$17.5^{+8.1}_{-8.1}$	$Y_{\text{P}}^{\text{BBN}}$	0.254346	$0.25435^{+0.00021}_{-0.00021}$	$\chi^2_{\text{lensing}}$	9.44	$10.2 (\nu: 1.2)$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$10^5 D/H$	2.712	$2.709^{+0.093}_{-0.088}$	$\chi^2_{\text{lowTEB}}$	10493.04	$10494.0 (\nu: 1.2)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.229	$13.225^{+0.077}_{-0.079}$	$\chi^2_{\text{plik}}$	770.9	$783.7 (\nu: 15.8)$
$c_{217}$	0.99621	$0.9963^{+0.0029}_{-0.0029}$	$z_*$	1090.40	$1090.35^{+0.89}_{-0.87}$	$\chi^2_{\text{prior}}$	2.4	$7.6 (\nu: 6.7)$
$H_0$	72.41	$72.6^{+2.1}_{-2.0}$	$r_*$	140.21	$140.28^{+0.88}_{-0.89}$	$\chi^2_{\text{CMB}}$	11273.3	$11287.9 (\nu: 15.8)$
$\Omega_\Lambda$	0.7172	$0.719^{+0.023}_{-0.024}$	$100\theta_*$	1.04028	$1.04031^{+0.00091}_{-0.00089}$			
$\Omega_m$	0.2828	$0.281^{+0.024}_{-0.023}$	$D_A/\text{Gpc}$	13.478	$13.485^{+0.082}_{-0.082}$			

Best-fit  $\chi^2_{\text{eff}} = 11275.77$ ;  $\bar{\chi}^2_{\text{eff}} = 11295.46$ ;  $R - 1 = 0.00748$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.44 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10493.04 plik\_dx11dr2\_HM\_v18.TT: 770.85

# 11.60 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_nnup57\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022774	$0.02277^{+0.00032}_{-0.00032}$	$A_{143}^{\text{dust}TE}$	0.157	$0.15^{+0.11}_{-0.10}$	$z_*$	1090.54	$1090.53^{+0.59}_{-0.57}$
$\Omega_c h^2$	0.12671	$0.1266^{+0.0030}_{-0.0030}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.33^{+0.16}_{-0.16}$	$r_*$	139.76	$139.79^{+0.60}_{-0.59}$
$100\theta_{\text{MC}}$	1.04011	$1.04012^{+0.00061}_{-0.00063}$	$A_{217}^{\text{dust}TE}$	1.65	$1.66^{+0.50}_{-0.50}$	$100\theta_*$	1.03989	$1.03991^{+0.00060}_{-0.00062}$
$\tau$	0.0742	$0.075^{+0.028}_{-0.027}$	$c_{100}$	0.99804	$0.9981^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.440	$13.443^{+0.056}_{-0.055}$
$\ln(10^{10} A_s)$	3.099	$3.100^{+0.051}_{-0.050}$	$c_{217}$	0.99633	$0.9963^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1061.80	$1061.77^{+0.61}_{-0.61}$
$n_s$	0.9880	$0.9881^{+0.0096}_{-0.0096}$	$H_0$	71.64	$71.7^{+1.4}_{-1.3}$	$r_{\text{drag}}$	142.23	$142.27^{+0.59}_{-0.57}$
$y_{\text{cal}}$	1.00019	$1.0001^{+0.0049}_{-0.0050}$	$\Omega_\Lambda$	0.7074	$0.708^{+0.016}_{-0.017}$	$k_D$	0.14431	$0.14427^{+0.00064}_{-0.00065}$
$A_{217}^{\text{CIB}}$	70.3	$67^{+10}_{-10}$	$\Omega_m$	0.2926	$0.292^{+0.017}_{-0.016}$	$100\theta_D$	0.161977	$0.16199^{+0.00036}_{-0.00036}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m h^2$	0.15013	$0.1500^{+0.0028}_{-0.0028}$	$z_{\text{eq}}$	3318	$3316^{+62}_{-63}$
$A_{143}^{\text{tSZ}}$	5.88	$4.7^{+3.9}_{-4.0}$	$\Omega_m h^3$	0.10755	$0.10752^{+0.00065}_{-0.00066}$	$k_{\text{eq}}$	0.010508	$0.01050^{+0.00020}_{-0.00020}$
$A_{100}^{\text{PS}}$	267	$273^{+50}_{-50}$	$\sigma_8$	0.8441	$0.844^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	0.8295	$0.830^{+0.013}_{-0.012}$
$A_{143}^{\text{PS}}$	41.7	$48^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4566	$0.456^{+0.014}_{-0.013}$	$100\theta_{s,\text{eq}}$	0.4575	$0.4578^{+0.0064}_{-0.0062}$
$A_{143 \times 217}^{\text{PS}}$	31	$39^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6208	$0.621^{+0.014}_{-0.014}$	$r_{\text{drag}}/D_V(0.57)$	0.07254	$0.0726^{+0.0010}_{-0.00098}$
$A_{217}^{\text{PS}}$	91.7	$94^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9973	$0.997^{+0.021}_{-0.021}$	$H(0.57)$	97.17	$97.19^{+0.62}_{-0.60}$
$A^{\text{kSZ}}$	3.3	—	$\langle d^2 \rangle^{1/2}$	2.4331	$2.433^{+0.048}_{-0.048}$	$D_A(0.57)$	1318.9	$1318^{+17}_{-16}$
$A_{100}^{\text{dust}TT}$	7.95	$7.7^{+3.7}_{-3.7}$	$z_{\text{re}}$	9.71	$9.7^{+2.4}_{-2.6}$	$F_{\text{AP}}(0.57)$	0.67116	$0.6710^{+0.0043}_{-0.0042}$
$A_{143}^{\text{dust}TT}$	9.31	$9.4^{+3.6}_{-3.7}$	$10^9 A_s$	2.217	$2.22^{+0.12}_{-0.11}$	$f\sigma_8(0.57)$	0.4854	$0.485^{+0.010}_{-0.010}$
$A_{143 \times 217}^{\text{dust}TT}$	17.3	$17.6^{+8.2}_{-8.1}$	$10^9 A_s e^{-2\tau}$	1.9108	$1.911^{+0.024}_{-0.024}$	$\sigma_8(0.57)$	0.6328	$0.633^{+0.016}_{-0.015}$
$A_{217}^{\text{dust}TT}$	81.1	$81^{+10}_{-10}$	$D_{40}$	1203.9	$1205^{+22}_{-23}$	$f_{2000}^{143}$	33.2	$33^{+5}_{-5}$
$A_{100}^{\text{dust}EE}$	0.0819	$0.083^{+0.011}_{-0.011}$	$D_{220}$	5723	$5724^{+78}_{-77}$	$f_{2000}^{143 \times 217}$	35.33	$35.3^{+3.7}_{-3.7}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0503	$0.0504^{+0.0099}_{-0.0098}$	$D_{810}$	2539.9	$2540^{+27}_{-27}$	$f_{2000}^{217}$	108.62	$108.5^{+3.7}_{-3.7}$
$A_{100 \times 217}^{\text{dust}EE}$	0.098	$0.099^{+0.064}_{-0.064}$	$D_{1420}$	812.2	$812.2^{+9.3}_{-9.4}$	$\chi^2_{\text{lensing}}$	10.56	$11.2 (\nu: 2.2)$
$A_{143}^{\text{dust}EE}$	0.1012	$0.102^{+0.014}_{-0.013}$	$D_{2000}$	227.55	$227.5^{+3.1}_{-3.2}$	$\chi^2_{\text{lowTEB}}$	10493.07	$10493.57 (\nu: 0.4)$
$A_{143 \times 217}^{\text{dust}EE}$	0.219	$0.219^{+0.090}_{-0.092}$	$n_{s,0.002}$	0.9880	$0.9881^{+0.0096}_{-0.0096}$	$\chi^2_{\text{plik}}$	2446.8	$2465.1 (\nu: 25.4)$
$A_{217}^{\text{dust}EE}$	0.630	$0.64^{+0.25}_{-0.26}$	$Y_P$	0.252998	$0.25300^{+0.00014}_{-0.00014}$	$\chi^2_{\text{prior}}$	8.4	$21 (\nu: 16.6)$
$A_{100}^{\text{dust}TE}$	0.137	$0.141^{+0.075}_{-0.074}$	$Y_P^{\text{BBN}}$	0.254352	$0.25435^{+0.00014}_{-0.00014}$	$\chi^2_{\text{CMB}}$	12950.4	$12970.0 (\nu: 24.0)$
$A_{100 \times 143}^{\text{dust}TE}$	0.125	$0.132^{+0.057}_{-0.057}$	$10^5 \text{D/H}$	2.709	$2.710^{+0.061}_{-0.060}$			
$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.17}_{-0.16}$	Age/Gyr	13.2470	$13.246^{+0.050}_{-0.049}$			

Best-fit  $\chi^2_{\text{eff}} = 12958.80$ ;  $\bar{\chi}^2_{\text{eff}} = 12990.67$ ;  $R - 1 = 0.00731$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 10.56 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.07 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2446.77

### 11.61 base\_nnu\_plikHM\_TT\_lowTEB\_nnu1\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.023209	$0.02318^{+0.00049}_{-0.00047}$	$\Omega_m h^2$	0.15195	$0.1524^{+0.0043}_{-0.0042}$	$z_{\text{drag}}$	1063.17	$1063.15^{+0.94}_{-0.88}$
$\Omega_c h^2$	0.12809	$0.1285^{+0.0046}_{-0.0044}$	$\Omega_m h^3$	0.11627	$0.1163^{+0.0011}_{-0.0011}$	$r_{\text{drag}}$	139.55	$139.48^{+0.83}_{-0.82}$
$100\theta_{\text{MC}}$	1.04027	$1.04025^{+0.00092}_{-0.00094}$	$\sigma_8$	0.8713	$0.870^{+0.021}_{-0.022}$	$k_{\text{D}}$	0.14613	$0.14619^{+0.00096}_{-0.00097}$
$\tau$	0.1066	$0.102^{+0.036}_{-0.036}$	$\sigma_8 \Omega_m^{0.5}$	0.4439	$0.445^{+0.017}_{-0.017}$	$100\theta_{\text{D}}$	0.16288	$0.16291^{+0.00052}_{-0.00051}$
$\ln(10^{10} A_s)$	3.165	$3.158^{+0.065}_{-0.065}$	$\sigma_8 \Omega_m^{0.25}$	0.6219	$0.622^{+0.015}_{-0.016}$	$z_{\text{eq}}$	3188	$3197^{+90}_{-87}$
$n_s$	1.0124	$1.012^{+0.013}_{-0.013}$	$\sigma_8/h^{0.5}$	0.9961	$0.996^{+0.022}_{-0.023}$	$k_{\text{eq}}$	0.010362	$0.01039^{+0.00029}_{-0.00028}$
$y_{\text{cal}}$	0.99970	$1.0003^{+0.0048}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.409	$2.406^{+0.049}_{-0.051}$	$100\theta_{\text{eq}}$	0.8566	$0.855^{+0.019}_{-0.019}$
$A_{217}^{\text{CIB}}$	71.4	$68^{+10}_{-10}$	$z_{\text{re}}$	12.50	$12.1^{+2.7}_{-3.0}$	$100\theta_{\text{s,eq}}$	0.4713	$0.4704^{+0.0097}_{-0.0096}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.369	$2.35^{+0.16}_{-0.15}$	$r_{\text{drag}}/D_V(0.57)$	0.07469	$0.0746^{+0.0016}_{-0.0015}$
$A_{143}^{\text{tSZ}}$	4.53	$< 7.51$	$10^9 A_s e^{-2\tau}$	1.9139	$1.919^{+0.027}_{-0.027}$	$H(0.57)$	101.08	$101.0^{+1.1}_{-1.0}$
$A_{100}^{\text{PS}}$	278	$277^{+50}_{-50}$	$D_{40}$	1178.0	$1179^{+23}_{-22}$	$D_A(0.57)$	1251.1	$1253^{+24}_{-24}$
$A_{143}^{\text{PS}}$	46.1	$52^{+20}_{-20}$	$D_{220}$	5724	$5727^{+82}_{-80}$	$F_{\text{AP}}(0.57)$	0.6623	$0.6629^{+0.0061}_{-0.0058}$
$A_{143 \times 217}^{\text{PS}}$	30	$40^{+20}_{-20}$	$D_{810}$	2537.4	$2542^{+26}_{-27}$	$f\sigma_8(0.57)$	0.4899	$0.490^{+0.011}_{-0.012}$
$A_{217}^{\text{PS}}$	89.3	$95^{+20}_{-20}$	$D_{1420}$	809.8	$811.4^{+9.7}_{-9.9}$	$\sigma_8(0.57)$	0.6627	$0.661^{+0.020}_{-0.020}$
$A^{\text{kSZ}}$	5.1	—	$D_{2000}$	225.86	$226.2^{+3.6}_{-3.5}$	$f_{2000}^{143}$	35.7	$36^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.72	$7.7^{+3.7}_{-3.7}$	$n_{\text{s},0.002}$	1.0124	$1.012^{+0.013}_{-0.013}$	$f_{2000}^{143 \times 217}$	36.90	$37^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.32	$9.2^{+3.5}_{-3.6}$	$Y_{\text{P}}$	0.258372	$0.25836^{+0.00021}_{-0.00020}$	$f_{2000}^{217}$	110.02	$109.9^{+4.0}_{-4.0}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.6^{+8.3}_{-8.1}$	$Y_{\text{P}}^{\text{BBN}}$	0.259745	$0.25973^{+0.00021}_{-0.00021}$	$\chi_{\text{lensing}}^2$	9.70	$10.5 (\nu: 1.1)$
$A_{217}^{\text{dustTT}}$	81.5	$82^{+10}_{-10}$	$10^5 D/H$	2.768	$2.773^{+0.091}_{-0.091}$	$\chi_{\text{lowTEB}}^2$	10494.33	$10494.3 (\nu: 2.5)$
$c_{100}$	0.99783	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	12.819	$12.823^{+0.076}_{-0.078}$	$\chi_{\text{plik}}^2$	773.9	$788.3 (\nu: 18.0)$
$c_{217}$	0.99677	$0.9964^{+0.0028}_{-0.0029}$	$z_*$	1090.51	$1090.58^{+0.88}_{-0.87}$	$\chi_{\text{prior}}^2$	3.4	$7.6 (\nu: 6.7)$
$H_0$	76.52	$76.3^{+2.2}_{-2.1}$	$r_*$	137.24	$137.16^{+0.85}_{-0.84}$	$\chi_{\text{CMB}}^2$	11278.0	$11293.2 (\nu: 16.4)$
$\Omega_\Lambda$	0.7405	$0.738^{+0.021}_{-0.022}$	$100\theta_*$	1.03977	$1.03975^{+0.00090}_{-0.00092}$			
$\Omega_m$	0.2595	$0.262^{+0.022}_{-0.021}$	$D_A/\text{Gpc}$	13.199	$13.191^{+0.079}_{-0.077}$			

Best-fit  $\chi_{\text{eff}}^2 = 11281.34$ ;  $\bar{\chi}_{\text{eff}}^2 = 11300.80$ ;  $R - 1 = 0.00923$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.70 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.33 plik\_dx11dr2\_HM\_v18.TT: 773.95

## 11.62 base\_nnu\_plikHM\_TTTEEE\_lowTEB\_nnu1\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.023105	$0.02314^{+0.00032}_{-0.00032}$	$A_{143}^{\text{dust}TE}$	0.154	$0.15^{+0.11}_{-0.11}$	$z_*$	1090.98	$1090.91^{+0.61}_{-0.58}$
$\Omega_c h^2$	0.13238	$0.1321^{+0.0032}_{-0.0031}$	$A_{143 \times 217}^{\text{dust}TE}$	0.332	$0.33^{+0.16}_{-0.16}$	$r_*$	136.36	$136.40^{+0.58}_{-0.58}$
$100\theta_{\text{MC}}$	1.03960	$1.03967^{+0.00061}_{-0.00059}$	$A_{217}^{\text{dust}TE}$	1.65	$1.65^{+0.50}_{-0.50}$	$100\theta_*$	1.03911	$1.03917^{+0.00060}_{-0.00058}$
$\tau$	0.0822	$0.085^{+0.028}_{-0.028}$	$c_{100}$	0.99802	$0.9980^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.123	$13.126^{+0.054}_{-0.054}$
$\ln(10^{10} A_s)$	3.125	$3.131^{+0.052}_{-0.051}$	$c_{217}$	0.99661	$0.9965^{+0.0028}_{-0.0029}$	$z_{\text{drag}}$	1063.25	$1063.30^{+0.62}_{-0.58}$
$n_s$	1.0028	$1.0046^{+0.0098}_{-0.0096}$	$H_0$	74.65	$74.8^{+1.4}_{-1.4}$	$r_{\text{drag}}$	138.68	$138.72^{+0.57}_{-0.55}$
$y_{\text{cal}}$	0.99973	$1.0002^{+0.0048}_{-0.0050}$	$\Omega_\Lambda$	0.7198	$0.721^{+0.015}_{-0.016}$	$k_D$	0.14706	$0.14705^{+0.00064}_{-0.00065}$
$A_{217}^{\text{CIB}}$	71.6	$69^{+10}_{-10}$	$\Omega_m$	0.2802	$0.279^{+0.016}_{-0.015}$	$100\theta_D$	0.162792	$0.16276^{+0.00036}_{-0.00034}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m h^2$	0.15613	$0.1559^{+0.0030}_{-0.0029}$	$z_{\text{eq}}$	3276	$3270^{+63}_{-62}$
$A_{143}^{\text{tSZ}}$	4.56	$4.3^{+3.8}_{-4.0}$	$\Omega_m h^3$	0.11654	$0.11659^{+0.00069}_{-0.00068}$	$k_{\text{eq}}$	0.010648	$0.01063^{+0.00020}_{-0.00020}$
$A_{100}^{\text{PS}}$	284	$280^{+50}_{-60}$	$\sigma_8$	0.8649	$0.867^{+0.019}_{-0.018}$	$100\theta_{\text{eq}}$	0.8384	$0.840^{+0.013}_{-0.013}$
$A_{143}^{\text{PS}}$	46.1	$51^{+10}_{-10}$	$\sigma_8 \Omega_m^{0.5}$	0.4578	$0.458^{+0.014}_{-0.013}$	$100\theta_{s,\text{eq}}$	0.4619	$0.4626^{+0.0065}_{-0.0064}$
$A_{143 \times 217}^{\text{PS}}$	30	$39^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6293	$0.630^{+0.014}_{-0.013}$	$r_{\text{drag}}/D_V(0.57)$	0.07322	$0.0733^{+0.0010}_{-0.0010}$
$A_{217}^{\text{PS}}$	88.9	$93^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0011	$1.003^{+0.021}_{-0.020}$	$H(0.57)$	100.28	$100.36^{+0.67}_{-0.65}$
$A^{\text{kSZ}}$	5.8	—	$\langle d^2 \rangle^{1/2}$	2.4201	$2.421^{+0.047}_{-0.047}$	$D_A(0.57)$	1271.9	$1270^{+16}_{-16}$
$A_{100}^{\text{dust}TT}$	7.95	$7.9^{+3.7}_{-3.7}$	$z_{\text{re}}$	10.52	$10.7^{+2.4}_{-2.6}$	$F_{\text{AP}}(0.57)$	0.66790	$0.6675^{+0.0042}_{-0.0041}$
$A_{143}^{\text{dust}TT}$	9.52	$9.5^{+3.6}_{-3.6}$	$10^9 A_s$	2.276	$2.29^{+0.12}_{-0.12}$	$f\sigma_8(0.57)$	0.4935	$0.494^{+0.010}_{-0.010}$
$A_{143 \times 217}^{\text{dust}TT}$	17.4	$17.9^{+8.1}_{-8.0}$	$10^9 A_s e^{-2\tau}$	1.9306	$1.932^{+0.024}_{-0.024}$	$\sigma_8(0.57)$	0.6518	$0.654^{+0.016}_{-0.016}$
$A_{217}^{\text{dust}TT}$	80.8	$81^{+10}_{-10}$	$D_{40}$	1187.1	$1186^{+21}_{-21}$	$f_{2000}^{143}$	36.4	$36^{+5}_{-5}$
$A_{100}^{\text{dust}EE}$	0.0831	$0.083^{+0.011}_{-0.011}$	$D_{220}$	5719	$5723^{+75}_{-75}$	$f_{2000}^{143 \times 217}$	37.52	$37.1^{+3.8}_{-3.7}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0509	$0.0514^{+0.0097}_{-0.0097}$	$D_{810}$	2541.0	$2544^{+27}_{-27}$	$f_{2000}^{217}$	110.53	$110.0^{+3.7}_{-3.7}$
$A_{100 \times 217}^{\text{dust}EE}$	0.100	$0.098^{+0.065}_{-0.063}$	$D_{1420}$	808.8	$810.6^{+9.3}_{-9.5}$	$\chi^2_{\text{lensing}}$	11.34	$12.3 (\nu: 3.0)$
$A_{143}^{\text{dust}EE}$	0.1024	$0.103^{+0.014}_{-0.014}$	$D_{2000}$	225.18	$225.9^{+3.1}_{-3.1}$	$\chi^2_{\text{lowTEB}}$	10492.41	$10492.9 (\nu: 0.6)$
$A_{143 \times 217}^{\text{dust}EE}$	0.215	$0.217^{+0.093}_{-0.092}$	$n_{s,0.002}$	1.0028	$1.0046^{+0.0098}_{-0.0096}$	$\chi^2_{\text{plik}}$	2462.5	$2480.6 (\nu: 27.3)$
$A_{217}^{\text{dust}EE}$	0.665	$0.63^{+0.26}_{-0.25}$	$Y_P$	0.258326	$0.25834^{+0.00013}_{-0.00014}$	$\chi^2_{\text{prior}}$	9.4	$22 (\nu: 17.7)$
$A_{100}^{\text{dust}TE}$	0.139	$0.141^{+0.074}_{-0.074}$	$Y_P^{\text{BBN}}$	0.259698	$0.25971^{+0.00013}_{-0.00014}$	$\chi^2_{\text{CMB}}$	12966.2	$12985.8 (\nu: 25.0)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.058}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.788	$2.781^{+0.062}_{-0.060}$			
$A_{100 \times 217}^{\text{dust}TE}$	0.301	$0.30^{+0.17}_{-0.17}$	$\text{Age}/\text{Gyr}$	12.8659	$12.859^{+0.049}_{-0.049}$			

Best-fit  $\chi^2_{\text{eff}} = 12975.67$ ;  $\bar{\chi}^2_{\text{eff}} = 13007.41$ ;  $R - 1 = 0.00946$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 11.35 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10492.41 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2462.47



### 11.63 base\_nnu\_lenonly

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02230	$0.0223^{+0.0017}_{-0.0018}$	$10^9 A_s$	2.25	$2.22^{+0.69}_{-0.64}$	$r_{\text{drag}}$	153.5	$138^{+40}_{-30}$
$\Omega_c h^2$	0.109	$0.136^{+0.061}_{-0.059}$	$10^9 A_s e^{-2\tau}$	1.96	$1.93^{+0.60}_{-0.56}$	$k_D$	0.1367	$0.147^{+0.021}_{-0.022}$
$100\theta_{\text{MC}}$	1.075	$1.00^{+0.16}_{-0.15}$	$D_{40}$	1331	$1290^{+500}_{-400}$	$100\theta_D$	0.1640	$0.160^{+0.015}_{-0.015}$
$N_{\text{eff}}$	2.44	—	$D_{220}$	6072	$6047^{+2000}_{-2000}$	$z_{\text{eq}}$	3424	$3076^{+1000}_{-1000}$
$\ln(10^{10} A_s)$	3.115	$3.09^{+0.29}_{-0.29}$	$D_{810}$	2674	$2206^{+900}_{-900}$	$k_{\text{eq}}$	0.01001	$0.0103^{+0.0022}_{-0.0021}$
$n_s$	0.9621	$0.959^{+0.039}_{-0.039}$	$D_{1420}$	849	$710^{+300}_{-300}$	$100\theta_{\text{eq}}$	0.835	$0.86^{+0.15}_{-0.15}$
$H_0$	75.1	—	$D_{2000}$	249	$231^{+100}_{-100}$	$100\theta_{s,\text{eq}}$	0.462	$0.472^{+0.076}_{-0.076}$
$\Omega_\Lambda$	0.765	$0.60^{+0.34}_{-0.49}$	$n_{s,0.002}$	0.9621	$0.959^{+0.039}_{-0.039}$	$r_{\text{drag}}/D_V(0.57)$	0.0795	$0.069^{+0.027}_{-0.024}$
$\Omega_m$	0.235	$0.40^{+0.49}_{-0.34}$	$Y_P$	0.2367	$0.262^{+0.040}_{-0.058}$	$H(0.57)$	97.1	$97^{+20}_{-20}$
$\Omega_m h^2$	0.132	$0.159^{+0.061}_{-0.059}$	$Y_P^{\text{BBN}}$	0.2380	$0.263^{+0.040}_{-0.058}$	$D_A(0.57)$	1289	$1395^{+500}_{-400}$
$\Omega_m h^3$	0.099	$0.110^{+0.076}_{-0.067}$	$10^5 D/H$	2.39	$3.3^{+1.8}_{-1.8}$	$F_{\text{AP}}(0.57)$	0.655	$0.691^{+0.094}_{-0.075}$
$\sigma_8$	0.847	$0.78^{+0.17}_{-0.19}$	Age/Gyr	13.43	$13.5^{+3.6}_{-3.2}$	$f\sigma_8(0.57)$	0.467	$0.446^{+0.054}_{-0.070}$
$\sigma_8 \Omega_m^{0.5}$	0.410	$0.46^{+0.13}_{-0.12}$	$z_*$	1088.4	$1092.9^{+8.5}_{-9.1}$	$\sigma_8(0.57)$	0.652	$0.57^{+0.19}_{-0.20}$
$\sigma_8 \Omega_m^{0.25}$	0.5894	$0.591^{+0.042}_{-0.041}$	$r_*$	150.7	$135^{+40}_{-30}$	$\chi^2_{\text{lensing}}$	8.41	$10.6 (\nu: 2.1)$
$\sigma_8/h^{0.5}$	0.978	$0.942^{+0.087}_{-0.076}$	$100\theta_*$	1.075	$1.00^{+0.17}_{-0.15}$	$\chi^2_{\text{prior}}$	0.01	$2.0 (\nu: 2.0)$
$\langle d^2 \rangle^{1/2}$	2.451	$2.47^{+0.13}_{-0.12}$	$D_A/\text{Gpc}$	14.01	$13.4^{+2.8}_{-2.6}$			
$z_{\text{re}}$	8.99	$9.7^{+1.6}_{-1.6}$	$z_{\text{drag}}$	1058.5	$1062.1^{+8.3}_{-8.8}$			

Best-fit  $\chi^2_{\text{eff}} = 8.42$ ;  $\bar{\chi}^2_{\text{eff}} = 12.65$ ;  $R - 1 = 0.00985$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp\_lenonly: 8.41

## 11.64 base\_nnu\_lensonly\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02246	$0.0223^{+0.0017}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	1.845	$1.83^{+0.48}_{-0.46}$	$100\theta_D$	0.1599	$0.162^{+0.011}_{-0.0092}$
$\Omega_c h^2$	0.114	$0.130^{+0.073}_{-0.059}$	$D_{40}$	1227	$1228^{+300}_{-300}$	$z_{\text{eq}}$	3385	$3402^{+1000}_{-900}$
$100\theta_{\text{MC}}$	1.042	$1.040^{+0.057}_{-0.056}$	$D_{220}$	5715	$5663^{+2000}_{-2000}$	$k_{\text{eq}}$	0.01014	$0.0106^{+0.0022}_{-0.0021}$
$N_{\text{eff}}$	2.78	—	$D_{810}$	2522	$2403^{+600}_{-600}$	$100\theta_{\text{eq}}$	0.817	$0.82^{+0.14}_{-0.13}$
$\ln(10^{10} A_s)$	3.055	$3.04^{+0.25}_{-0.24}$	$D_{1420}$	817	$754^{+300}_{-200}$	$100\theta_{\text{s,eq}}$	0.451	$0.454^{+0.071}_{-0.069}$
$n_s$	0.9623	$0.957^{+0.040}_{-0.039}$	$D_{2000}$	233	$219^{+100}_{-100}$	$r_{\text{drag}}/D_V(0.57)$	0.07177	$0.0718^{+0.0012}_{-0.0011}$
$H_0$	66.6	$70^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9623	$0.957^{+0.040}_{-0.039}$	$H(0.57)$	91.5	$96^{+20}_{-20}$
$\Omega_\Lambda$	0.691	$0.692^{+0.060}_{-0.064}$	$Y_P$	0.242	$0.248^{+0.049}_{-0.052}$	$D_A(0.57)$	1409	$1361^{+300}_{-300}$
$\Omega_m$	0.309	$0.308^{+0.064}_{-0.060}$	$Y_P^{\text{BBN}}$	0.243	$0.250^{+0.049}_{-0.052}$	$F_{\text{AP}}(0.57)$	0.6753	$0.675^{+0.016}_{-0.016}$
$\Omega_m h^2$	0.137	$0.153^{+0.073}_{-0.059}$	$10^5 D/H$	2.48	$2.9^{+1.9}_{-1.5}$	$f\sigma_8(0.57)$	0.4662	$0.468^{+0.030}_{-0.031}$
$\Omega_m h^3$	0.091	$0.111^{+0.089}_{-0.066}$	Age/Gyr	14.03	$13.5^{+3.0}_{-2.9}$	$\sigma_8(0.57)$	0.598	$0.603^{+0.050}_{-0.052}$
$\sigma_8$	0.803	$0.808^{+0.058}_{-0.060}$	$z_*$	1089.0	$1091^{+10}_{-9.0}$	$\chi^2_{\text{lensing}}$	8.52	$10.7 (\nu: 2.3)$
$\sigma_8 \Omega_m^{0.5}$	0.4461	$0.448^{+0.043}_{-0.041}$	$r_*$	147.3	$142^{+40}_{-30}$	$\chi^2_{6\text{DF}}$	0.011	$0.11 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.25}$	0.5985	$0.601^{+0.041}_{-0.041}$	$100\theta_*$	1.042	$1.040^{+0.059}_{-0.058}$	$\chi^2_{\text{MGS}}$	1.41	$1.61 (\nu: 0.4)$
$\sigma_8/h^{0.5}$	0.983	$0.969^{+0.079}_{-0.085}$	$D_A/\text{Gpc}$	14.14	$13.7^{+2.8}_{-2.8}$	$\chi^2_{\text{DR11CMass}}$	2.39	$3.3 (\nu: 1.0)$
$\langle d^2 \rangle^{1/2}$	2.449	$2.44^{+0.11}_{-0.11}$	$z_{\text{drag}}$	1059.5	$1060.7^{+9.2}_{-8.5}$	$\chi^2_{\text{DR11LOWZ}}$	0.48	$0.64 (\nu: 0.2)$
$z_{\text{re}}$	9.04	$9.4^{+1.9}_{-1.7}$	$r_{\text{drag}}$	150.0	$145^{+40}_{-40}$	$\chi^2_{\text{prior}}$	0.04	$2.1 (\nu: 2.2)$
$10^9 A_s$	2.12	$2.11^{+0.55}_{-0.52}$	$k_D$	0.1390	$0.143^{+0.025}_{-0.022}$	$\chi^2_{\text{BAO}}$	4.29	$5.6 (\nu: 1.9)$

Best-fit  $\chi^2_{\text{eff}} = 12.86$ ;  $\bar{\chi}^2_{\text{eff}} = 18.35$ ;  $R - 1 = 0.00916$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.39 DR11LOWZ: 0.48 CMB - smica\_g30\_ftl\_full\_pp\_lensonly: 8.52

## 11.65 base\_nnu\_lensonly\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02228	$0.0223^{+0.0018}_{-0.0018}$	$10^9 A_s$	2.23	$2.24^{+0.71}_{-0.64}$	$z_{\text{drag}}$	1058.9	$1061.6^{+7.9}_{-8.4}$
$\Omega_c h^2$	0.111	$0.135^{+0.066}_{-0.061}$	$10^9 A_s e^{-2\tau}$	1.94	$1.95^{+0.62}_{-0.56}$	$r_{\text{drag}}$	150.9	$140^{+40}_{-30}$
$N_{\text{eff}}$	2.84	$< 7.89$	$D_{40}$	1304	$1318^{+500}_{-400}$	$k_D$	0.1377	$0.146^{+0.022}_{-0.023}$
$\ln(10^{10} A_s)$	3.105	$3.10^{+0.31}_{-0.31}$	$D_{220}$	6109	$6050^{+2000}_{-2000}$	$100\theta_D$	0.1604	$0.165^{+0.012}_{-0.015}$
$n_s$	0.9619	$0.959^{+0.039}_{-0.038}$	$D_{810}$	2656	$2532^{+800}_{-700}$	$z_{\text{eq}}$	3264	$3227^{+900}_{-700}$
$H_0$	68.2	—	$D_{1420}$	855	$781^{+300}_{-300}$	$k_{\text{eq}}$	0.00982	$0.0105^{+0.0023}_{-0.0020}$
$\Omega_\Lambda$	0.713	$0.72^{+0.15}_{-0.22}$	$D_{2000}$	242	$213^{+90}_{-90}$	$100\theta_{\text{eq}}$	0.838	$0.86^{+0.14}_{-0.16}$
$\Omega_m$	0.287	$0.28^{+0.22}_{-0.15}$	$n_{s,0.002}$	0.9619	$0.959^{+0.039}_{-0.038}$	$100\theta_{s,\text{eq}}$	0.463	$0.471^{+0.073}_{-0.082}$
$\Omega_m h^2$	0.133	$0.158^{+0.066}_{-0.061}$	$Y_P$	0.2425	$0.257^{+0.038}_{-0.054}$	$r_{\text{drag}}/D_V(0.57)$	0.0731	$0.0746^{+0.0098}_{-0.011}$
$\Omega_m h^3$	0.091	$0.125^{+0.086}_{-0.085}$	$Y_P^{\text{BBN}}$	0.2438	$0.259^{+0.039}_{-0.054}$	$H(0.57)$	92.1	$102^{+30}_{-30}$
$\sigma_8$	0.808	$0.829^{+0.098}_{-0.13}$	$10^5 D/H$	2.54	$3.1^{+1.5}_{-1.6}$	$D_A(0.57)$	1388	$1280^{+600}_{-400}$
$\sigma_8 \Omega_m^{0.5}$	0.432	$0.432^{+0.086}_{-0.080}$	Age/Gyr	13.99	$13.0^{+4.3}_{-3.0}$	$F_{\text{AP}}(0.57)$	0.6696	$0.667^{+0.053}_{-0.039}$
$\sigma_8 \Omega_m^{0.25}$	0.5909	$0.597^{+0.042}_{-0.044}$	$z_*$	1089.0	$1092.3^{+9.0}_{-9.5}$	$f\sigma_8(0.57)$	0.4629	$0.465^{+0.036}_{-0.038}$
$\sigma_8/h^{0.5}$	0.978	$0.952^{+0.083}_{-0.073}$	$r_*$	148.1	$138^{+40}_{-30}$	$\sigma_8(0.57)$	0.607	$0.63^{+0.11}_{-0.14}$
$\langle d^2 \rangle^{1/2}$	2.468	$2.45^{+0.11}_{-0.10}$	$100\theta_*$	1.04114	$1.0402^{+0.0026}_{-0.0022}$	$\chi^2_{\text{lensing}}$	8.44	10.6 ( $\nu$ : 2.2)
$z_{\text{re}}$	9.02	$9.6^{+1.7}_{-1.8}$	$D_A/\text{Gpc}$	14.23	$13.2^{+3.4}_{-2.7}$	$\chi^2_{\text{prior}}$	0.01	2.0 ( $\nu$ : 1.9)

Best-fit  $\chi^2_{\text{eff}} = 8.45$ ;  $\bar{\chi}^2_{\text{eff}} = 12.66$ ;  $R - 1 = 0.00899$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp\_lensonly: 8.44

## 11.66 base\_nnu\_lensonly\_BAO\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02225	$0.0223^{+0.0018}_{-0.0018}$	$D_{40}$	1259	$1213^{+200}_{-200}$	$z_{\text{eq}}$	3351	$3369^{+120}_{-110}$
$\Omega_c h^2$	0.108	$0.131^{+0.076}_{-0.060}$	$D_{220}$	5903	$5564^{+1000}_{-1000}$	$k_{\text{eq}}$	0.00985	$0.0107^{+0.0027}_{-0.0022}$
$N_{\text{eff}}$	2.50	$3.7^{+3.9}_{-3.2}$	$D_{810}$	2610	$2419^{+700}_{-700}$	$100\theta_{\text{eq}}$	0.8216	$0.820^{+0.017}_{-0.017}$
$\ln(10^{10} A_s)$	3.074	$3.04^{+0.13}_{-0.12}$	$D_{1420}$	852	$769^{+300}_{-300}$	$100\theta_{s,\text{eq}}$	0.4538	$0.4528^{+0.0094}_{-0.0094}$
$n_s$	0.9616	$0.957^{+0.039}_{-0.039}$	$D_{2000}$	244	$215^{+100}_{-100}$	$r_{\text{drag}}/D_V(0.57)$	0.07181	$0.0718^{+0.0010}_{-0.0010}$
$H_0$	65.2	$70^{+20}_{-10}$	$n_{s,0.002}$	0.9616	$0.957^{+0.039}_{-0.039}$	$H(0.57)$	89.4	$97^{+20}_{-20}$
$\Omega_\Lambda$	0.6924	$0.693^{+0.018}_{-0.020}$	$Y_P$	0.2376	$0.250^{+0.039}_{-0.035}$	$D_A(0.57)$	1441	$1352^{+300}_{-300}$
$\Omega_m$	0.3076	$0.307^{+0.020}_{-0.018}$	$Y_P^{\text{BBN}}$	0.2389	$0.252^{+0.039}_{-0.035}$	$F_{\text{AP}}(0.57)$	0.67504	$0.6748^{+0.0050}_{-0.0047}$
$\Omega_m h^2$	0.131	$0.154^{+0.077}_{-0.061}$	$10^5 D/H$	2.42	$2.8^{+1.4}_{-1.1}$	$f\sigma_8(0.57)$	0.4620	$0.470^{+0.034}_{-0.033}$
$\Omega_m h^3$	0.085	$0.111^{+0.087}_{-0.065}$	Age/Gyr	14.36	$13.5^{+2.7}_{-3.0}$	$\sigma_8(0.57)$	0.5932	$0.604^{+0.046}_{-0.045}$
$\sigma_8$	0.796	$0.810^{+0.060}_{-0.059}$	$z_*$	1088.4	$1091.3^{+9.6}_{-8.0}$	$\chi^2_{\text{lensing}}$	8.43	10.7 ( $\nu$ : 2.3)
$\sigma_8 \Omega_m^{0.5}$	0.4415	$0.449^{+0.032}_{-0.032}$	$r_*$	150.8	$141^{+30}_{-30}$	$\chi^2_{6\text{DF}}$	0.006	0.064 ( $\nu$ : 0.0)
$\sigma_8 \Omega_m^{0.25}$	0.5929	$0.603^{+0.044}_{-0.043}$	$100\theta_*$	1.04137	$1.0407^{+0.0019}_{-0.0022}$	$\chi^2_{\text{MGS}}$	1.47	1.60 ( $\nu$ : 0.2)
$\sigma_8/h^{0.5}$	0.986	$0.969^{+0.057}_{-0.061}$	$D_A/\text{Gpc}$	14.48	$13.6^{+2.7}_{-3.0}$	$\chi^2_{\text{DR11CMass}}$	2.40	3.08 ( $\nu$ : 0.5)
$\langle d^2 \rangle^{1/2}$	2.464	$2.443^{+0.097}_{-0.096}$	$z_{\text{drag}}$	1058.3	$1060.8^{+9.2}_{-8.5}$	$\chi^2_{\text{DR11LOWZ}}$	0.43	0.60 ( $\nu$ : 0.2)
$z_{\text{re}}$	8.92	$9.5^{+1.8}_{-1.6}$	$r_{\text{drag}}$	153.6	$144^{+30}_{-30}$	$\chi^2_{\text{prior}}$	0.01	2.1 ( $\nu$ : 2.1)
$10^9 A_s$	2.164	$2.09^{+0.27}_{-0.27}$	$k_D$	0.1363	$0.144^{+0.025}_{-0.022}$	$\chi^2_{\text{BAO}}$	4.31	5.3 ( $\nu$ : 1.0)
$10^9 A_s e^{-2\tau}$	1.881	$1.82^{+0.24}_{-0.23}$	$100\theta_D$	0.1592	$0.162^{+0.011}_{-0.0094}$			

Best-fit  $\chi^2_{\text{eff}} = 12.75$ ;  $\bar{\chi}^2_{\text{eff}} = 18.13$ ;  $R - 1 = 0.00647$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMass: 2.40 DR11LOWZ: 0.43 CMB - smica\_g30\_ftl\_full\_pp\_lensonly: 8.43

## 11.67 base\_nnu\_WLonlyHeymans\_BAO\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02227	$0.0223^{+0.0018}_{-0.0018}$	$D_{40}$	1003	$836^{+400}_{-300}$	$z_{\text{eq}}$	3371	$3415^{+120}_{-130}$
$\Omega_c h^2$	0.126	$0.191^{+0.077}_{-0.097}$	$D_{220}$	4602	$3699^{+2000}_{-1000}$	$k_{\text{eq}}$	0.01055	$0.0127^{+0.0025}_{-0.0033}$
$N_{\text{eff}}$	3.43	$> 2.22$	$D_{810}$	2018	$1574^{+900}_{-600}$	$100\theta_{\text{eq}}$	0.8189	$0.813^{+0.019}_{-0.017}$
$\ln(10^{10} A_s)$	2.861	$2.69^{+0.35}_{-0.30}$	$D_{1420}$	641	$470^{+400}_{-200}$	$100\theta_{s,\text{eq}}$	0.4524	$0.450^{+0.010}_{-0.0096}$
$n_s$	0.9615	$0.962^{+0.040}_{-0.039}$	$D_{2000}$	177	$122^{+100}_{-70}$	$r_{\text{drag}}/D_V(0.57)$	0.07176	$0.0718^{+0.0011}_{-0.0010}$
$H_0$	69.5	$83^{+20}_{-20}$	$n_{s,0.002}$	0.9615	$0.962^{+0.040}_{-0.039}$	$H(0.57)$	95.4	$114^{+20}_{-30}$
$\Omega_\Lambda$	0.6919	$0.693^{+0.019}_{-0.019}$	$Y_P$	0.2504	$0.276^{+0.025}_{-0.044}$	$D_A(0.57)$	1351	$1150^{+300}_{-200}$
$\Omega_m$	0.3081	$0.307^{+0.019}_{-0.019}$	$Y_P^{\text{BBN}}$	0.2517	$0.278^{+0.025}_{-0.044}$	$F_{\text{AP}}(0.57)$	0.67516	$0.6749^{+0.0048}_{-0.0048}$
$\Omega_m h^2$	0.149	$0.214^{+0.077}_{-0.097}$	$10^5 D/H$	2.74	$3.9^{+1.5}_{-1.8}$	$f\sigma_8(0.57)$	0.4333	$0.431^{+0.033}_{-0.036}$
$\Omega_m h^3$	0.104	$0.183^{+0.095}_{-0.11}$	Age/Gyr	13.45	$11.5^{+3.4}_{-2.2}$	$\sigma_8(0.57)$	0.5563	$0.554^{+0.047}_{-0.049}$
$\sigma_8$	0.747	$0.744^{+0.060}_{-0.064}$	$z_*$	1090.9	$1098.5^{+9.2}_{-12}$	$\chi^2_{6\text{DF}}$	0.010	$0.070 (\nu: 0.0)$
$\sigma_8 \Omega_m^{0.5}$	0.4145	$0.412^{+0.030}_{-0.033}$	$r_*$	141.2	$120^{+40}_{-20}$	$\chi^2_{\text{MGS}}$	1.41	$1.53 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	0.5563	$0.554^{+0.042}_{-0.046}$	$100\theta_*$	1.04075	$1.0391^{+0.0026}_{-0.0017}$	$\chi^2_{\text{DR11CMASS}}$	2.42	$3.12 (\nu: 0.5)$
$\sigma_8/h^{0.5}$	0.896	$0.82^{+0.14}_{-0.11}$	$D_A/\text{Gpc}$	13.57	$11.6^{+3.4}_{-2.2}$	$\chi^2_{\text{DR11LOWZ}}$	0.48	$0.67 (\nu: 0.2)$
$\langle d^2 \rangle^{1/2}$	2.230	$2.08^{+0.33}_{-0.29}$	$z_{\text{drag}}$	1060.4	$1066.4^{+8.5}_{-10}$	$\chi^2_{\text{CFHTLENS}}$	96.68	$97.3 (\nu: 1.3)$
$z_{\text{re}}$	9.41	$10.8^{+1.8}_{-2.3}$	$r_{\text{drag}}$	143.8	$122^{+40}_{-20}$	$\chi^2_{\text{prior}}$	0.01	$2.0 (\nu: 2.1)$
$10^9 A_s$	1.75	$1.49^{+0.56}_{-0.44}$	$k_D$	0.1428	$0.161^{+0.023}_{-0.030}$	$\chi^2_{\text{BAO}}$	4.32	$5.4 (\nu: 1.1)$
$10^9 A_s e^{-2\tau}$	1.519	$1.30^{+0.49}_{-0.39}$	$100\theta_D$	0.1621	$0.170^{+0.010}_{-0.014}$			

Best-fit  $\chi^2_{\text{eff}} = 101.00$ ;  $\bar{\chi}^2_{\text{eff}} = 104.73$ ;  $R - 1 = 0.00369$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMASS: 2.42 DR11LOWZ: 0.48 WL - CFHTLENS\_6bin\_conservative: 96.68

### 11.68 base\_nnu\_WLonlyHeymans\_H070p6\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02225	$0.0223^{+0.0018}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	0.66	$1.21^{+1.6}_{-0.90}$	$k_D$	0.1678	$0.154^{+0.022}_{-0.027}$
$\Omega_c h^2$	0.221	$0.169^{+0.076}_{-0.089}$	$D_{40}$	400	$793^{+1000}_{-700}$	$100\theta_D$	0.1691	$0.1656^{+0.0076}_{-0.0080}$
$N_{\text{eff}}$	6.11	$4.7^{+2.4}_{-2.8}$	$D_{220}$	1679	$3601^{+6000}_{-3000}$	$z_{\text{eq}}$	4122	$3676^{+600}_{-800}$
$\ln(10^{10} A_s)$	2.03	$< 3.46$	$D_{810}$	779	$1573^{+2000}_{-1000}$	$k_{\text{eq}}$	0.01495	$0.0125^{+0.0035}_{-0.0044}$
$n_s$	0.9625	$0.961^{+0.039}_{-0.039}$	$D_{1420}$	236	$493^{+800}_{-400}$	$100\theta_{\text{eq}}$	0.708	$0.775^{+0.14}_{-0.097}$
$H_0$	70.4	$70.9^{+6.3}_{-6.4}$	$D_{2000}$	60	$135^{+200}_{-100}$	$100\theta_{s,\text{eq}}$	0.394	$0.429^{+0.074}_{-0.051}$
$\Omega_\Lambda$	0.507	$0.62^{+0.18}_{-0.15}$	$n_{s,0.002}$	0.9625	$0.961^{+0.039}_{-0.039}$	$r_{\text{drag}}/D_V(0.57)$	0.0645	$0.0689^{+0.0097}_{-0.0065}$
$\Omega_m$	0.493	$0.38^{+0.15}_{-0.18}$	$Y_P$	0.2777	$0.264^{+0.025}_{-0.031}$	$H(0.57)$	109.4	$102^{+10}_{-10}$
$\Omega_m h^2$	0.244	$0.192^{+0.076}_{-0.089}$	$Y_P^{\text{BBN}}$	0.2791	$0.265^{+0.025}_{-0.031}$	$D_A(0.57)$	1251	$1294^{+130}_{-130}$
$\Omega_m h^3$	0.172	$0.136^{+0.062}_{-0.064}$	$10^5 D/H$	3.67	$3.2^{+1.0}_{-1.0}$	$F_{\text{AP}}(0.57)$	0.7166	$0.692^{+0.033}_{-0.044}$
$\sigma_8$	0.574	$0.68^{+0.21}_{-0.14}$	Age/Gyr	11.59	$12.5^{+2.1}_{-1.7}$	$f\sigma_8(0.57)$	0.354	$0.401^{+0.085}_{-0.063}$
$\sigma_8 \Omega_m^{0.5}$	0.4032	$0.409^{+0.031}_{-0.031}$	$z_*$	1100.5	$1095.4^{+8.9}_{-10}$	$\sigma_8(0.57)$	0.403	$0.50^{+0.19}_{-0.13}$
$\sigma_8 \Omega_m^{0.25}$	0.481	$0.526^{+0.088}_{-0.067}$	$r_*$	115.1	$129^{+30}_{-20}$	$\chi^2_{\text{H070p6}}$	0.00	$0.99 (\nu: 1.0)$
$\sigma_8/h^{0.5}$	0.685	$0.81^{+0.25}_{-0.17}$	$100\theta_*$	1.03924	$1.0400^{+0.0017}_{-0.0014}$	$\chi^2_{\text{CFHTLENS}}$	95.48	$97.2 (\nu: 1.2)$
$\langle d^2 \rangle^{1/2}$	1.66	$2.00^{+0.82}_{-0.51}$	$D_A/\text{Gpc}$	11.07	$12.4^{+2.9}_{-2.2}$	$\chi^2_{\text{prior}}$	0.02	$2.0 (\nu: 2.1)$
$z_{\text{re}}$	11.34	$10.3^{+1.8}_{-2.0}$	$z_{\text{drag}}$	1068.2	$1064.0^{+7.9}_{-9.2}$			
$10^9 A_s$	0.76	$1.4^{+1.8}_{-1.0}$	$r_{\text{drag}}$	117.3	$132^{+30}_{-20}$			

Best-fit  $\chi^2_{\text{eff}} = 95.50$ ;  $\bar{\chi}^2_{\text{eff}} = 100.19$ ;  $R - 1 = 0.00718$

$\chi^2_{\text{eff}}$ : Hubble - H070p6: 0.00 WL - CFHTLENS\_6bin\_conservative: 95.48

### 11.69 base\_nnu\_WLonlyHeymans\_H070p6\_BAO\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02225	$0.0222^{+0.0018}_{-0.0018}$	$D_{40}$	967	$956^{+300}_{-300}$	$z_{\text{eq}}$	3376	$3379^{+100}_{-100}$
$\Omega_c h^2$	0.1328	$0.135^{+0.031}_{-0.029}$	$D_{220}$	4404	$4361^{+1000}_{-1000}$	$k_{\text{eq}}$	0.01079	$0.0109^{+0.0011}_{-0.0011}$
$N_{\text{eff}}$	3.77	$3.9^{+1.5}_{-1.4}$	$D_{810}$	1923	$1905^{+500}_{-500}$	$100\theta_{\text{eq}}$	0.8182	$0.818^{+0.017}_{-0.016}$
$\ln(10^{10} A_s)$	2.827	$2.81^{+0.21}_{-0.22}$	$D_{1420}$	604	$599^{+200}_{-200}$	$100\theta_{\text{s,eq}}$	0.4520	$0.4519^{+0.0092}_{-0.0089}$
$n_s$	0.9607	$0.963^{+0.040}_{-0.039}$	$D_{2000}$	165	$164^{+60}_{-50}$	$r_{\text{drag}}/D_V(0.57)$	0.07175	$0.0717^{+0.0010}_{-0.0010}$
$H_0$	71.1	$71.5^{+6.5}_{-6.3}$	$n_{\text{s},0.002}$	0.9607	$0.963^{+0.040}_{-0.039}$	$H(0.57)$	97.6	$98.2^{+9.0}_{-8.6}$
$\Omega_\Lambda$	0.6919	$0.692^{+0.018}_{-0.019}$	$Y_P$	0.2547	$0.255^{+0.017}_{-0.018}$	$D_A(0.57)$	1321	$1316^{+120}_{-120}$
$\Omega_m$	0.3081	$0.308^{+0.019}_{-0.018}$	$Y_P^{\text{BBN}}$	0.2560	$0.257^{+0.017}_{-0.018}$	$F_{\text{AP}}(0.57)$	0.67515	$0.6752^{+0.0048}_{-0.0047}$
$\Omega_m h^2$	0.1557	$0.158^{+0.030}_{-0.029}$	$10^5 D/H$	2.87	$2.92^{+0.71}_{-0.67}$	$f\sigma_8(0.57)$	0.4318	$0.430^{+0.034}_{-0.036}$
$\Omega_m h^3$	0.1107	$0.113^{+0.032}_{-0.031}$	Age/Gyr	13.16	$13.1^{+1.2}_{-1.1}$	$\sigma_8(0.57)$	0.5543	$0.552^{+0.049}_{-0.048}$
$\sigma_8$	0.744	$0.741^{+0.063}_{-0.064}$	$z_*$	1091.88	$1092.2^{+5.0}_{-4.8}$	$\chi^2_{\text{H070p6}}$	0.02	1.1 ( $\nu$ : 1.2)
$\sigma_8 \Omega_m^{0.5}$	0.4130	$0.411^{+0.031}_{-0.034}$	$r_*$	138.0	$137^{+13}_{-12}$	$\chi^2_{6\text{DF}}$	0.010	0.072 ( $\nu$ : 0.0)
$\sigma_8 \Omega_m^{0.25}$	0.5544	$0.552^{+0.043}_{-0.046}$	$100\theta_*$	1.04054	$1.04047^{+0.00088}_{-0.00089}$	$\chi^2_{\text{MGS}}$	1.41	1.49 ( $\nu$ : 0.2)
$\sigma_8/h^{0.5}$	0.883	$0.877^{+0.079}_{-0.083}$	$D_A/\text{Gpc}$	13.27	$13.2^{+1.3}_{-1.2}$	$\chi^2_{\text{DR11CMASS}}$	2.42	3.10 ( $\nu$ : 0.5)
$\langle d^2 \rangle^{1/2}$	2.200	$2.18^{+0.24}_{-0.24}$	$z_{\text{drag}}$	1061.12	$1061.3^{+4.6}_{-4.9}$	$\chi^2_{\text{DR11LOWZ}}$	0.49	0.71 ( $\nu$ : 0.2)
$z_{\text{re}}$	9.59	$9.65^{+0.97}_{-0.95}$	$r_{\text{drag}}$	140.7	$140^{+13}_{-12}$	$\chi^2_{\text{CFHTLENS}}$	96.74	97.8 ( $\nu$ : 1.1)
$10^9 A_s$	1.690	$1.67^{+0.38}_{-0.37}$	$k_D$	0.1451	$0.1456^{+0.0098}_{-0.0097}$	$\chi^2_{\text{prior}}$	0.00	2.1 ( $\nu$ : 2.1)
$10^9 A_s e^{-2\tau}$	1.469	$1.46^{+0.33}_{-0.32}$	$100\theta_D$	0.1632	$0.1635^{+0.0056}_{-0.0051}$	$\chi^2_{\text{BAO}}$	4.32	5.4 ( $\nu$ : 1.0)

Best-fit  $\chi^2_{\text{eff}} = 101.09$ ;  $\bar{\chi}^2_{\text{eff}} = 106.26$ ;  $R - 1 = 0.00672$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMASS: 2.42 DR11LOWZ: 0.49 Hubble - H070p6: 0.02 WL - CFHTLENS\_6bin\_conservative: 96.74

## 11.70 base\_nnu\_CamSpecDS\_TT\_lowTEB

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00076}_{-0.00071} \quad (+0.3\sigma)$	$\beta_1^1$	$0.0^{+2.0}_{-2.0}$	$r_*$	$143.1^{+5.2}_{-5.3} \quad (-0.3\sigma)$
$\Omega_c h^2$	$0.1217^{+0.0081}_{-0.0077} \quad (+0.3\sigma)$	$H_0$	$68.9^{+5.8}_{-5.7} \quad (+0.3\sigma)$	$100\theta_*$	$1.0408^{+0.0014}_{-0.0013} \quad (-0.2\sigma)$
$100\theta_{\text{MC}}$	$1.0407^{+0.0011}_{-0.0011} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.694^{+0.039}_{-0.041} \quad (+0.3\sigma)$	$z_{\text{drag}}$	$1060.3^{+2.5}_{-2.4} \quad (+0.3\sigma)$
$\tau$	$0.079^{+0.046}_{-0.042} \quad (-0.0\sigma)$	$\Omega_m$	$0.306^{+0.041}_{-0.039} \quad (-0.3\sigma)$	$r_{\text{drag}}$	$145.8^{+5.5}_{-5.5} \quad (-0.3\sigma)$
$N_{\text{eff}}$	$3.24^{+0.66}_{-0.60} \quad (+0.3\sigma)$	$\Omega_m h^2$	$0.1447^{+0.0085}_{-0.0081} \quad (+0.3\sigma)$	$k_D$	$0.1417^{+0.0041}_{-0.0039} \quad (+0.3\sigma)$
$\ln(10^{10} A_s)$	$3.097^{+0.098}_{-0.091} \quad (+0.0\sigma)$	$\Omega_m h^3$	$0.0998^{+0.013}_{-0.013} \quad (+0.3\sigma)$	$100\theta_D$	$0.1613^{+0.0014}_{-0.0013} \quad (+0.3\sigma)$
$n_s$	$0.975^{+0.032}_{-0.030} \quad (+0.4\sigma)$	$\sigma_8$	$0.836^{+0.047}_{-0.046} \quad (+0.1\sigma)$	$z_{\text{eq}}$	$3360^{+140}_{-140} \quad (-0.3\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0050} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.462^{+0.026}_{-0.025} \quad (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.821^{+0.029}_{-0.027} \quad (+0.3\sigma)$
$A_{100}^{\text{PS}}$	$282^{+40}_{-50} \quad (+0.8\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.621^{+0.028}_{-0.028} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0719^{+0.0023}_{-0.0021} \quad (+0.3\sigma)$
$A_{143}^{\text{PS}}$	$48^{+10}_{-10} \quad (+0.4\sigma)$	$\sigma_8/h^{0.5}$	$1.007^{+0.038}_{-0.039} \quad (-0.2\sigma)$	$H(0.57)$	$94.4^{+5.2}_{-5.1} \quad (+0.3\sigma)$
$A_{217}^{\text{PS}}$	$88^{+20}_{-20} \quad (-0.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.474^{+0.094}_{-0.097} \quad (-0.4\sigma)$	$D_A(0.57)$	$1366^{+90}_{-91} \quad (-0.3\sigma)$
$A_{217}^{\text{CIB}}$	$54^{+10}_{-10} \quad (-1.5\sigma)$	$z_{\text{re}}$	$10.0^{+3.9}_{-4.2} \quad (-0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.674^{+0.010}_{-0.010} \quad (-0.3\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.21 \quad (-1.1\sigma)$	$10^9 A_s$	$2.22^{+0.22}_{-0.21} \quad (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.484^{+0.023}_{-0.021} \quad (-0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.55^{+0.20}_{-0.19}$	$10^9 A_s e^{-2\tau}$	$1.888^{+0.040}_{-0.043} \quad (+0.2\sigma)$	$\sigma_8(0.57)$	$0.624^{+0.042}_{-0.041} \quad (+0.2\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1223^{+43}_{-43} \quad (-0.5\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.2487^{+0.0086}_{-0.0083} \quad (+0.2\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5709^{+81}_{-80} \quad (-0.2\sigma)$	$f_{2000}^{143}$	$33^{+6}_{-6} \quad (+0.9\sigma)$
$A_{100}^{\text{dust}}$	$0.97^{+0.37}_{-0.38}$	$D_{810}$	$2536^{+28}_{-28} \quad (+0.1\sigma)$	$f_{2000}^{217}$	$108.7^{+4.4}_{-4.4} \quad (+1.0\sigma)$
$A_{143}^{\text{dust}}$	$1.07^{+0.36}_{-0.36}$	$D_{1420}$	$814^{+10}_{-10} \quad (+0.1\sigma)$	$f_{2000}^{143 \times 217}$	$36^{+5}_{-5} \quad (+1.2\sigma)$
$A_{217}^{\text{dust}}$	$1.16^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.975^{+0.032}_{-0.030} \quad (+0.4\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.3 \quad (\nu: 3.3) \quad (-0.4\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.97^{+0.35}_{-0.35}$	$Y_{\text{P}}$	$0.2474^{+0.0086}_{-0.0083} \quad (+0.2\sigma)$	$\chi_{\text{CamSpec}}^2$	$8155.8 \quad (\nu: 17.8)$
$c_{100}$	$0.9984^{+0.0019}_{-0.0019} \quad (+0.7\sigma)$	Age/Gyr	$13.62^{+0.64}_{-0.66} \quad (-0.3\sigma)$	$\chi_{\text{prior}}^2$	$7.3 \quad (\nu: 5.3) \quad (-0.0\sigma)$
$c_{217}$	$0.9994^{+0.0034}_{-0.0035} \quad (+2.3\sigma)$	$z_*$	$1090.19^{+0.95}_{-0.93} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18652.1 \quad (\nu: 17.0) \quad (+1291.8\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 18659.44; \Delta\bar{\chi}_{\text{eff}}^2 = 7376.42; R - 1 = 0.00978$$



### 11.71 base\_nnu\_plikDS\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02233	$0.02240^{+0.00076}_{-0.00072}$ (+0.3 $\sigma$ )	$\Omega_m$	0.3115	$0.308^{+0.043}_{-0.039}$ (−0.2 $\sigma$ )	$D_A/\text{Gpc}$	13.835	$13.77^{+0.49}_{-0.49}$ (−0.2 $\sigma$ )
$\Omega_c h^2$	0.1205	$0.1214^{+0.0079}_{-0.0076}$ (+0.2 $\sigma$ )	$\Omega_m h^2$	0.1435	$0.1444^{+0.0083}_{-0.0080}$ (+0.2 $\sigma$ )	$z_{\text{drag}}$	1059.93	$1060.2^{+2.5}_{-2.5}$ (+0.3 $\sigma$ )
$100\theta_{\text{MC}}$	1.04081	$1.0407^{+0.0011}_{-0.0011}$ (−0.1 $\sigma$ )	$\Omega_m h^3$	0.0974	$0.099^{+0.013}_{-0.013}$ (+0.2 $\sigma$ )	$r_{\text{drag}}$	146.7	$146.0^{+5.5}_{-5.5}$ (−0.2 $\sigma$ )
$\tau$	0.0773	$0.080^{+0.045}_{-0.041}$ (−0.0 $\sigma$ )	$\sigma_8$	0.8312	$0.835^{+0.047}_{-0.042}$ (+0.1 $\sigma$ )	$k_D$	0.14102	$0.1415^{+0.0040}_{-0.0039}$ (+0.3 $\sigma$ )
$N_{\text{eff}}$	3.11	$3.20^{+0.66}_{-0.60}$ (+0.2 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4639	$0.463^{+0.026}_{-0.026}$ (−0.1 $\sigma$ )	$100\theta_D$	0.16102	$0.1612^{+0.0014}_{-0.0013}$ (+0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.091	$3.098^{+0.096}_{-0.089}$ (+0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6210	$0.622^{+0.027}_{-0.027}$ (−0.0 $\sigma$ )	$z_{\text{eq}}$	3384	$3369^{+150}_{-150}$ (−0.1 $\sigma$ )
$n_s$	0.9689	$0.972^{+0.032}_{-0.030}$ (+0.2 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0090	$1.009^{+0.038}_{-0.038}$ (−0.1 $\sigma$ )	$k_{\text{eq}}$	0.010371	$0.01038^{+0.00031}_{-0.00031}$ (+0.1 $\sigma$ )
$y_{\text{cal}}$	1.00030	$1.0004^{+0.0049}_{-0.0049}$ (+0.0 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.488	$2.485^{+0.095}_{-0.096}$ (−0.2 $\sigma$ )	$100\theta_{\text{eq}}$	0.8165	$0.820^{+0.029}_{-0.028}$ (+0.1 $\sigma$ )
$A_{217}^{\text{CIB}}$	71.0	$68^{+10}_{-10}$ (+0.6 $\sigma$ )	$z_{\text{re}}$	9.93	$10.1^{+3.8}_{-4.0}$ (−0.0 $\sigma$ )	$100\theta_{\text{s,eq}}$	0.4511	$0.453^{+0.015}_{-0.014}$ (+0.1 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$10^9 A_s$	2.200	$2.22^{+0.22}_{-0.20}$ (+0.0 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07156	$0.0718^{+0.0023}_{-0.0021}$ (+0.2 $\sigma$ )
$A_{143}^{\text{tSZ}}$	6.77	$4.6^{+3.7}_{-4.0}$ (−0.3 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.8843	$1.888^{+0.042}_{-0.043}$ (+0.2 $\sigma$ )	$H(0.57)$	93.4	$94.1^{+5.2}_{-4.8}$ (+0.2 $\sigma$ )
$A_{100}^{\text{PS}}$	279	$286^{+50}_{-50}$ (+0.9 $\sigma$ )	$D_{40}$	1231.3	$1230^{+44}_{-42}$ (−0.2 $\sigma$ )	$D_A(0.57)$	1382	$1371^{+92}_{-92}$ (−0.2 $\sigma$ )
$A_{143}^{\text{PS}}$	44.6	$50^{+10}_{-20}$ (+0.6 $\sigma$ )	$D_{220}$	5719	$5723^{+79}_{-79}$ (+0.1 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6760	$0.675^{+0.011}_{-0.010}$ (−0.2 $\sigma$ )
$A_{143 \times 217}^{\text{PS}}$	34.8	$41^{+20}_{-20}$ (+0.1 $\sigma$ )	$D_{810}$	2536.0	$2537^{+28}_{-28}$ (+0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4833	$0.484^{+0.022}_{-0.021}$ (+0.0 $\sigma$ )
$A_{217}^{\text{PS}}$	93.6	$93^{+20}_{-20}$ (−0.4 $\sigma$ )	$D_{1420}$	815.1	$814^{+10}_{-10}$ (+0.1 $\sigma$ )	$\sigma_8(0.57)$	0.6183	$0.623^{+0.043}_{-0.038}$ (+0.1 $\sigma$ )
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.38	$229.9^{+4.3}_{-4.3}$ (−0.1 $\sigma$ )	$f_{2000}^{143}$	33.0	$34^{+6}_{-6}$ (+1.0 $\sigma$ )
$A_{100}^{\text{dustTT}}$	7.33	$7.4^{+3.7}_{-3.6}$ (−0.0 $\sigma$ )	$n_{\text{s},0.002}$	0.9689	$0.972^{+0.032}_{-0.030}$ (+0.2 $\sigma$ )	$f_{2000}^{143 \times 217}$	33.08	$34^{+5}_{-4}$ (+0.4 $\sigma$ )
$A_{143}^{\text{dustTT}}$	9.14	$9.1^{+3.6}_{-3.6}$ (+0.1 $\sigma$ )	$Y_{\text{P}}$	0.2462	$0.2474^{+0.0087}_{-0.0085}$ (+0.2 $\sigma$ )	$f_{2000}^{217}$	113.84	$114.4^{+4.4}_{-4.3}$ (+3.4 $\sigma$ )
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.3^{+8.2}_{-8.1}$ (+0.0 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.2476	$0.2487^{+0.0087}_{-0.0085}$ (+0.2 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10495.9	$10496.9$ ( $\nu$ : 3.6) (−0.2 $\sigma$ )
$A_{217}^{\text{dustTT}}$	80.6	$81^{+10}_{-10}$ (−0.2 $\sigma$ )	$10^5 D/H$	2.620	$2.64^{+0.14}_{-0.13}$ (+0.1 $\sigma$ )	$\chi_{\text{plik}}^2$	748.2	$762.5$ ( $\nu$ : 17.5) (−2.6 $\sigma$ )
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$ (+0.0 $\sigma$ )	Age/Gyr	13.74	$13.66^{+0.65}_{-0.65}$ (−0.2 $\sigma$ )	$\chi_{\text{prior}}^2$	2.0	$7.3$ ( $\nu$ : 6.0) (−0.0 $\sigma$ )
$c_{217}$	0.99636	$0.9964^{+0.0029}_{-0.0028}$ (+0.3 $\sigma$ )	$z_*$	1090.07	$1090.15^{+0.94}_{-0.92}$ (+0.0 $\sigma$ )	$\chi_{\text{CMB}}^2$	11244.0	$11259.4$ ( $\nu$ : 16.4) (−2.8 $\sigma$ )
$H_0$	67.9	$68.6^{+5.8}_{-5.7}$ (+0.2 $\sigma$ )	$r_*$	144.0	$143.4^{+5.3}_{-5.2}$ (−0.2 $\sigma$ )			
$\Omega_\Lambda$	0.6885	$0.692^{+0.039}_{-0.043}$ (+0.2 $\sigma$ )	$100\theta_*$	1.04095	$1.0408^{+0.0014}_{-0.0013}$ (−0.2 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 11246.05$ ;  $\Delta\chi_{\text{eff}}^2 = -15.89$ ;  $\bar{\chi}_{\text{eff}}^2 = 11266.65$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = -16.37$ ;  $R - 1 = 0.00910$   
 $\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.85 ( $\Delta$  -0.44) plik\_dx11dr2\_DS.v18\_TT: 748.19

## 11.72 base\_nnu\_plikHM\_TT\_WMAPTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02219	$0.02224^{+0.00066}_{-0.00063}$	$\Omega_m$	0.3180	$0.315^{+0.038}_{-0.036}$	$D_A/\text{Gpc}$	13.915	$13.86^{+0.48}_{-0.47}$
$\Omega_c h^2$	0.1196	$0.1205^{+0.0080}_{-0.0077}$	$\Omega_m h^2$	0.1424	$0.1434^{+0.0083}_{-0.0080}$	$z_{\text{drag}}$	1059.47	$1059.7^{+2.3}_{-2.2}$
$100\theta_{\text{MC}}$	1.04089	$1.0408^{+0.0011}_{-0.0011}$	$\Omega_m h^3$	0.0953	$0.097^{+0.012}_{-0.011}$	$r_{\text{drag}}$	147.6	$146.9^{+5.3}_{-5.3}$
$\tau$	0.0727	$0.074^{+0.026}_{-0.023}$	$\sigma_8$	0.8251	$0.829^{+0.033}_{-0.031}$	$k_D$	0.14034	$0.1408^{+0.0039}_{-0.0038}$
$N_{\text{eff}}$	3.01	$3.09^{+0.60}_{-0.56}$	$\sigma_8 \Omega_m^{0.5}$	0.4653	$0.465^{+0.026}_{-0.026}$	$100\theta_D$	0.16087	$0.1611^{+0.0013}_{-0.0013}$
$\ln(10^{10} A_s)$	3.079	$3.084^{+0.058}_{-0.057}$	$\sigma_8 \Omega_m^{0.25}$	0.6196	$0.620^{+0.024}_{-0.024}$	$z_{\text{eq}}$	3405	$3392^{+130}_{-130}$
$n_s$	0.9635	$0.966^{+0.028}_{-0.027}$	$\sigma_8/h^{0.5}$	1.0087	$1.008^{+0.033}_{-0.033}$	$k_{\text{eq}}$	0.010365	$0.01038^{+0.00031}_{-0.00030}$
$y_{\text{cal}}$	1.00026	$1.0004^{+0.0049}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.494	$2.490^{+0.090}_{-0.091}$	$100\theta_{\text{eq}}$	0.8123	$0.815^{+0.026}_{-0.024}$
$A_{217}^{\text{CIB}}$	66.7	$64^{+10}_{-10}$	$z_{\text{re}}$	9.50	$9.6^{+2.3}_{-2.2}$	$100\theta_{s,\text{eq}}$	0.4490	$0.450^{+0.013}_{-0.012}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.04	—	$10^9 A_s$	2.173	$2.18^{+0.13}_{-0.12}$	$r_{\text{drag}}/D_V(0.57)$	0.07123	$0.0714^{+0.0020}_{-0.0018}$
$A_{143}^{\text{tSZ}}$	7.05	$5.0^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8791	$1.883^{+0.042}_{-0.044}$	$H(0.57)$	92.56	$93.2^{+4.7}_{-4.3}$
$A_{100}^{\text{PS}}$	254	$260^{+60}_{-50}$	$D_{40}$	1237.3	$1235^{+43}_{-43}$	$D_A(0.57)$	1398	$1388^{+84}_{-83}$
$A_{143}^{\text{PS}}$	39.3	$44^{+20}_{-20}$	$D_{220}$	5715	$5718^{+78}_{-80}$	$F_{\text{AP}}(0.57)$	0.6777	$0.6768^{+0.0093}_{-0.0092}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{810}$	2534.3	$2535^{+27}_{-28}$	$f\sigma_8(0.57)$	0.4814	$0.482^{+0.017}_{-0.017}$
$A_{217}^{\text{PS}}$	97.7	$97^{+20}_{-20}$	$D_{1420}$	815.0	$814^{+10}_{-9.9}$	$\sigma_8(0.57)$	0.6123	$0.616^{+0.029}_{-0.027}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.53	$230.0^{+4.5}_{-4.4}$	$f_{2000}^{143}$	29.5	$31^{+7}_{-7}$
$A_{100}^{\text{dustTT}}$	7.37	$7.5^{+3.7}_{-3.6}$	$n_{s,0.002}$	0.9635	$0.966^{+0.028}_{-0.027}$	$f_{2000}^{143 \times 217}$	32.1	$33^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	8.91	$9.0^{+3.6}_{-3.6}$	$Y_{\text{P}}$	0.2448	$0.2459^{+0.0081}_{-0.0081}$	$f_{2000}^{217}$	105.74	$106.4^{+4.8}_{-4.7}$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.2^{+8.2}_{-8.1}$	$Y_{\text{P}}^{\text{BBN}}$	0.2461	$0.2472^{+0.0081}_{-0.0081}$	$\chi_{\text{WMAPTEB}}^2$	19734.5	$19735.5 (\nu: 3.9)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	2.611	$2.63^{+0.14}_{-0.14}$	$\chi_{\text{plik}}^2$	763.8	$778.4 (\nu: 18.1)$
$c_{100}$	0.99795	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.85	$13.78^{+0.61}_{-0.61}$	$\chi_{\text{prior}}^2$	1.9	$7.4 (\nu: 6.3)$
$c_{217}$	0.99597	$0.9960^{+0.0028}_{-0.0028}$	$z_*$	1090.07	$1090.17^{+0.96}_{-0.95}$	$\chi_{\text{CMB}}^2$	20498.2	$20513.8 (\nu: 16.3)$
$H_0$	66.92	$67.6^{+5.1}_{-4.7}$	$r_*$	144.9	$144.2^{+5.1}_{-5.0}$			
$\Omega_\Lambda$	0.6820	$0.685^{+0.036}_{-0.038}$	$100\theta_*$	1.04112	$1.0410^{+0.0014}_{-0.0014}$			

Best-fit  $\chi_{\text{eff}}^2 = 20500.14$ ;  $\bar{\chi}_{\text{eff}}^2 = 20521.16$ ;  $R - 1 = 0.00763$

$\chi_{\text{eff}}^2$ : CMB - bflike\_WMAP353ggf\_LFI312\_nw8: 19734.46 plik\_dx11dr2\_HM\_v18\_TT: 763.76

### 11.73 base\_nnu\_plikHM\_TT\_WMAPTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00065}_{-0.00061}$	$\Omega_m$	$0.303^{+0.029}_{-0.028}$	$D_A/\text{Gpc}$	$13.84^{+0.45}_{-0.46}$
$\Omega_c h^2$	$0.1195^{+0.0078}_{-0.0072}$	$\Omega_m h^2$	$0.1425^{+0.0082}_{-0.0076}$	$z_{\text{drag}}$	$1059.9^{+2.2}_{-2.2}$
$100\theta_{\text{MC}}$	$1.0410^{+0.0011}_{-0.0011}$	$\Omega_m h^3$	$0.098^{+0.012}_{-0.011}$	$r_{\text{drag}}$	$146.8^{+5.1}_{-5.1}$
$\tau$	$0.071^{+0.024}_{-0.022}$	$\sigma_8$	$0.821^{+0.031}_{-0.028}$	$k_D$	$0.1408^{+0.0038}_{-0.0036}$
$N_{\text{eff}}$	$3.15^{+0.58}_{-0.54}$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.017}_{-0.017}$	$100\theta_D$	$0.1612^{+0.0013}_{-0.0012}$
$\ln(10^{10} A_s)$	$3.074^{+0.056}_{-0.053}$	$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.017}_{-0.017}$	$z_{\text{eq}}$	$3347^{+100}_{-100}$
$n_s$	$0.972^{+0.025}_{-0.024}$	$\sigma_8/h^{0.5}$	$0.991^{+0.021}_{-0.021}$	$k_{\text{eq}}$	$0.01028^{+0.00028}_{-0.00027}$
$y_{\text{cal}}$	$1.0002^{+0.0049}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.057}_{-0.059}$	$100\theta_{\text{eq}}$	$0.823^{+0.021}_{-0.020}$
$A_{217}^{\text{CIB}}$	$65^{+10}_{-10}$	$z_{\text{re}}$	$9.2^{+2.2}_{-2.1}$	$100\theta_{\text{s,eq}}$	$0.455^{+0.011}_{-0.010}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s$	$2.16^{+0.12}_{-0.12}$	$r_{\text{drag}}/D_V(0.57)$	$0.0721^{+0.0016}_{-0.0015}$
$A_{143}^{\text{tSZ}}$	$4.9^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.040}_{-0.044}$	$H(0.57)$	$93.8^{+4.4}_{-4.2}$
$A_{100}^{\text{PS}}$	$262^{+60}_{-50}$	$D_{40}$	$1221^{+36}_{-35}$	$D_A(0.57)$	$1372^{+77}_{-76}$
$A_{143}^{\text{PS}}$	$45^{+20}_{-20}$	$D_{220}$	$5718^{+79}_{-79}$	$F_{\text{AP}}(0.57)$	$0.6738^{+0.0074}_{-0.0074}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$D_{810}$	$2533^{+27}_{-27}$	$f\sigma_8(0.57)$	$0.475^{+0.014}_{-0.013}$
$A_{217}^{\text{PS}}$	$96^{+20}_{-20}$	$D_{1420}$	$814.1^{+9.9}_{-9.8}$	$\sigma_8(0.57)$	$0.613^{+0.029}_{-0.026}$
$A^{\text{kSZ}}$	—	$D_{2000}$	$229.6^{+4.5}_{-4.3}$	$f_{2000}^{143}$	$31^{+7}_{-7}$
$A_{100}^{\text{dustTT}}$	$7.5^{+3.7}_{-3.6}$	$n_{\text{s},0.002}$	$0.972^{+0.025}_{-0.024}$	$f_{2000}^{143 \times 217}$	$33^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	$9.0^{+3.6}_{-3.6}$	$Y_{\text{P}}$	$0.2466^{+0.0078}_{-0.0077}$	$f_{2000}^{217}$	$106.7^{+4.6}_{-4.6}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.2^{+8.2}_{-8.3}$	$Y_{\text{P}}^{\text{BBN}}$	$0.2480^{+0.0078}_{-0.0077}$	$\chi_{\text{lensing}}^2$	$10.0 (\nu: 1.2)$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	$2.63^{+0.14}_{-0.13}$	$\chi_{\text{WMAPTEB}}^2$	$19733.8 (\nu: 2.2)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$\text{Age}/\text{Gyr}$	$13.70^{+0.58}_{-0.57}$	$\chi_{\text{plik}}^2$	$780.4 (\nu: 20.7)$
$c_{217}$	$0.9960^{+0.0028}_{-0.0028}$	$z_*$	$1090.00^{+0.92}_{-0.92}$	$\chi_{\text{prior}}^2$	$7.4 (\nu: 6.6)$
$H_0$	$68.7^{+4.7}_{-4.4}$	$r_*$	$144.1^{+4.9}_{-4.9}$	$\chi_{\text{CMB}}^2$	$20524.3 (\nu: 20.8)$
$\Omega_\Lambda$	$0.697^{+0.028}_{-0.029}$	$100\theta_*$	$1.0411^{+0.0013}_{-0.0014}$		

$$\bar{\chi}_{\text{eff}}^2 = 20531.67; R - 1 = 0.02458$$

# 11.74 base\_nnu\_plikHM\_TT\_WMAPTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02231^{+0.00047}_{-0.00046}$	$\Omega_m h^2$	$0.1436^{+0.0079}_{-0.0075}$	$r_{\text{drag}}$	$146.5^{+4.4}_{-4.4}$
$\Omega_c h^2$	$0.1207^{+0.0077}_{-0.0073}$	$\Omega_m h^3$	$0.0979^{+0.0092}_{-0.0085}$	$k_D$	$0.1411^{+0.0033}_{-0.0032}$
$100\theta_{\text{MC}}$	$1.0408^{+0.0011}_{-0.0011}$	$\sigma_8$	$0.830^{+0.030}_{-0.029}$	$100\theta_D$	$0.1612^{+0.0011}_{-0.0011}$
$\tau$	$0.075^{+0.024}_{-0.022}$	$\sigma_8 \Omega_m^{0.5}$	$0.461^{+0.019}_{-0.018}$	$z_{\text{eq}}$	$3373^{+63}_{-63}$
$N_{\text{eff}}$	$3.14^{+0.46}_{-0.44}$	$\sigma_8 \Omega_m^{0.25}$	$0.619^{+0.022}_{-0.021}$	$k_{\text{eq}}$	$0.01036^{+0.00029}_{-0.00028}$
$\ln(10^{10} A_s)$	$3.087^{+0.052}_{-0.049}$	$\sigma_8/h^{0.5}$	$1.005^{+0.029}_{-0.027}$	$100\theta_{\text{eq}}$	$0.818^{+0.012}_{-0.012}$
$n_s$	$0.970^{+0.017}_{-0.017}$	$\langle d^2 \rangle^{1/2}$	$2.479^{+0.066}_{-0.065}$	$100\theta_{s,\text{eq}}$	$0.4521^{+0.0061}_{-0.0059}$
$y_{\text{cal}}$	$1.0004^{+0.0048}_{-0.0048}$	$z_{\text{re}}$	$9.7^{+2.1}_{-2.1}$	$r_{\text{drag}}/D_V(0.57)$	$0.07169^{+0.00092}_{-0.00088}$
$A_{217}^{\text{CIB}}$	$65^{+10}_{-10}$	$10^9 A_s$	$2.19^{+0.12}_{-0.11}$	$H(0.57)$	$93.6^{+3.2}_{-3.1}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.885^{+0.041}_{-0.041}$	$D_A(0.57)$	$1378^{+52}_{-51}$
$A_{143}^{\text{tSZ}}$	$5.0^{+3.7}_{-3.8}$	$D_{40}$	$1230^{+30}_{-30}$	$F_{\text{AP}}(0.57)$	$0.6755^{+0.0043}_{-0.0043}$
$A_{100}^{\text{PS}}$	$261^{+60}_{-50}$	$D_{220}$	$5720^{+77}_{-79}$	$f\sigma_8(0.57)$	$0.482^{+0.017}_{-0.016}$
$A_{143}^{\text{PS}}$	$45^{+20}_{-20}$	$D_{810}$	$2535^{+27}_{-27}$	$\sigma_8(0.57)$	$0.618^{+0.024}_{-0.023}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$D_{1420}$	$814.2^{+9.7}_{-10}$	$f_{2000}^{143}$	$31^{+7}_{-6}$
$A_{217}^{\text{PS}}$	$97^{+20}_{-20}$	$D_{2000}$	$229.8^{+4.4}_{-4.2}$	$f_{2000}^{143 \times 217}$	$33^{+5}_{-5}$
$A^{\text{kSZ}}$	—	$n_{s,0.002}$	$0.970^{+0.017}_{-0.017}$	$f_{2000}^{217}$	$106.6^{+4.6}_{-4.5}$
$A_{100}^{\text{dustTT}}$	$7.4^{+3.7}_{-3.6}$	$Y_{\text{P}}$	$0.2466^{+0.0061}_{-0.0062}$	$\chi_{\text{WMAPTEB}}^2$	$19734.8 (\nu: 2.8)$
$A_{143}^{\text{dustTT}}$	$9.0^{+3.6}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	$0.2480^{+0.0061}_{-0.0062}$	$\chi_{\text{plik}}^2$	$778.4 (\nu: 16.3)$
$A_{143 \times 217}^{\text{dustTT}}$	$17.2^{+8.1}_{-8.3}$	$10^5 \text{D}/\text{H}$	$2.64^{+0.13}_{-0.13}$	$\chi_{6\text{DF}}^2$	$0.065 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$\text{Age}/\text{Gyr}$	$13.71^{+0.44}_{-0.43}$	$\chi_{\text{MGS}}^2$	$1.40 (\nu: 0.2)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	$1090.15^{+0.94}_{-0.94}$	$\chi_{\text{DR11CMass}}^2$	$2.96 (\nu: 0.3)$
$c_{217}$	$0.9960^{+0.0028}_{-0.0028}$	$r_*$	$143.9^{+4.2}_{-4.2}$	$\chi_{\text{DR11LOWZ}}^2$	$0.73 (\nu: 0.2)$
$H_0$	$68.2^{+3.0}_{-2.8}$	$100\theta_*$	$1.0409^{+0.0013}_{-0.0013}$	$\chi_{\text{prior}}^2$	$7.4 (\nu: 6.5)$
$\Omega_\Lambda$	$0.691^{+0.017}_{-0.017}$	$D_A/\text{Gpc}$	$13.82^{+0.39}_{-0.40}$	$\chi_{\text{CMB}}^2$	$20513.2 (\nu: 15.4)$
$\Omega_m$	$0.309^{+0.017}_{-0.017}$	$z_{\text{drag}}$	$1059.9^{+1.7}_{-1.7}$	$\chi_{\text{BAO}}^2$	$5.2 (\nu: 0.7)$

$$\bar{\chi}_{\text{eff}}^2 = 20525.70; R - 1 = 0.01099$$

## 12 nnu+meffsterile

### 12.1 base\_nnu\_meffsterile\_plikHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02225	$0.02243^{+0.00059}_{-0.00056}$	$\Omega_\Lambda$	0.6860	$0.680^{+0.040}_{-0.042}$	$r_*$	144.61	$142.3^{+3.0}_{-3.6}$
$\Omega_c h^2$	0.1196	$0.1214^{+0.0088}_{-0.0097}$	$\Omega_m$	0.3140	$0.320^{+0.042}_{-0.040}$	$100\theta_*$	1.04110	$1.0406^{+0.0011}_{-0.0012}$
$100\theta_{MC}$	1.04092	$1.0406^{+0.0010}_{-0.0010}$	$\Omega_m h^2$	0.1425	$0.1476^{+0.0084}_{-0.0077}$	$D_A/\text{Gpc}$	13.890	$13.68^{+0.28}_{-0.33}$
$\tau$	0.0746	$0.086^{+0.044}_{-0.041}$	$\Omega_\nu h^2$	0.0007	$< 0.0100$	$z_{\text{drag}}$	1059.63	$1060.6^{+1.8}_{-1.6}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.003	$< 0.883$	$\Omega_m h^3$	0.0960	$0.1004^{+0.0082}_{-0.0060}$	$r_{\text{drag}}$	147.32	$144.9^{+3.1}_{-3.7}$
$N_{\text{eff}}$	3.046	$< 3.70$	$\sigma_8$	0.826	$0.801^{+0.071}_{-0.078}$	$k_D$	0.14054	$0.1424^{+0.0029}_{-0.0025}$
$\ln(10^{10} A_s)$	3.083	$3.112^{+0.090}_{-0.081}$	$\sigma_8 \Omega_m^{0.5}$	0.4631	$0.452^{+0.033}_{-0.035}$	$100\theta_D$	0.16093	$0.1614^{+0.0011}_{-0.00094}$
$n_s$	0.9655	$0.973^{+0.025}_{-0.022}$	$\sigma_8 \Omega_m^{0.25}$	0.6186	$0.602^{+0.044}_{-0.049}$	$z_{\text{eq}}$	3390	$3324^{+140}_{-150}$
$y_{\text{cal}}$	1.00021	$1.0003^{+0.0050}_{-0.0049}$	$\sigma_8/h^{0.5}$	1.007	$0.971^{+0.071}_{-0.081}$	$k_{\text{eq}}$	0.010348	$0.01035^{+0.00042}_{-0.00045}$
$A_{217}^{\text{CIB}}$	67.3	$65^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.489	$2.498^{+0.095}_{-0.095}$	$100\theta_{\text{eq}}$	0.8151	$0.830^{+0.031}_{-0.029}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$z_{\text{re}}$	9.67	$10.7^{+3.6}_{-3.9}$	$100\theta_{s, \text{eq}}$	0.4504	$0.458^{+0.016}_{-0.015}$
$A_{143}^{\text{tSZ}}$	7.22	$4.8^{+3.9}_{-3.9}$	$10^9 A_s$	2.182	$2.25^{+0.20}_{-0.19}$	$r_{\text{drag}}/D_V(0.57)$	0.07144	$0.0711^{+0.0023}_{-0.0021}$
$A_{100}^{\text{PS}}$	253	$264^{+60}_{-60}$	$10^9 A_s e^{-2\tau}$	1.8794	$1.893^{+0.035}_{-0.034}$	$H(0.57)$	92.91	$94.1^{+3.3}_{-2.3}$
$A_{143}^{\text{PS}}$	38.5	$47^{+20}_{-20}$	$D_{40}$	1234.8	$1227^{+36}_{-40}$	$D_A(0.57)$	1391	$1376^{+50}_{-64}$
$A_{143 \times 217}^{\text{PS}}$	32	$40^{+20}_{-20}$	$D_{220}$	5718	$5718^{+83}_{-80}$	$F_{\text{AP}}(0.57)$	0.6767	$0.678^{+0.010}_{-0.010}$
$A_{217}^{\text{PS}}$	96.9	$97^{+20}_{-20}$	$D_{810}$	2534.4	$2536^{+28}_{-27}$	$f\sigma_8(0.57)$	0.4811	$0.468^{+0.036}_{-0.040}$
$A^{\text{kSZ}}$	0.0	—	$D_{1420}$	814.5	$813^{+10}_{-10}$	$\sigma_8(0.57)$	0.614	$0.594^{+0.060}_{-0.065}$
$A_{100}^{\text{dustTT}}$	7.45	$7.5^{+3.7}_{-3.7}$	$D_{2000}$	230.38	$228.7^{+4.1}_{-4.1}$	$f_{2000}^{143}$	29.7	$32^{+7}_{-6}$
$A_{143}^{\text{dustTT}}$	9.05	$9.0^{+3.6}_{-3.6}$	$n_{s, 0.002}$	0.9655	$0.973^{+0.025}_{-0.022}$	$f_{2000}^{143 \times 217}$	32.31	$34^{+5}_{-5}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.3^{+8.3}_{-8.2}$	$Y_P$	0.24534	$0.2488^{+0.0055}_{-0.0042}$	$f_{2000}^{217}$	105.92	$107.5^{+4.6}_{-4.4}$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$Y_P^{\text{BBN}}$	0.24667	$0.2501^{+0.0056}_{-0.0043}$	$\chi_{\text{lowTEB}}^2$	10496.2	$10497.2 (\nu: 3.8)$
$c_{100}$	0.99795	$0.9979^{+0.0015}_{-0.0015}$	$10^5 D/H$	2.613	$2.67^{+0.12}_{-0.12}$	$\chi_{\text{plik}}^2$	763.8	$780.1 (\nu: 19.7)$
$c_{217}$	0.99594	$0.9961^{+0.0028}_{-0.0029}$	$\text{Age/Gyr}$	13.808	$13.62^{+0.29}_{-0.41}$	$\chi_{\text{prior}}^2$	2.0	$7.5 (\nu: 6.4)$
$H_0$	67.38	$68.0^{+4.3}_{-3.5}$	$z_*$	1090.04	$1090.4^{+1.0}_{-0.97}$	$\chi_{\text{CMB}}^2$	11260.0	$11277.3 (\nu: 18.1)$

Best-fit  $\chi_{\text{eff}}^2 = 11261.98$ ;  $\bar{\chi}_{\text{eff}}^2 = 11284.79$ ;  $R - 1 = 0.01342$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.19 plik\_dx11dr2\_HM\_v18\_TT: 763.77

## 12.2 base\_nnu\_meffsterile\_plikHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022236	$0.02237^{+0.00035}_{-0.00036}$	$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.131^{+0.057}_{-0.057}$	$Y_P^{\text{BBN}}$	0.24666	$0.2488^{+0.0032}_{-0.0025}$
$\Omega_c h^2$	0.1200	$0.1204^{+0.0066}_{-0.0070}$	$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.17}_{-0.17}$	$10^5 D/H$	2.617	$2.646^{+0.078}_{-0.075}$
$100\theta_{\text{MC}}$	1.04074	$1.04055^{+0.00070}_{-0.00072}$	$A_{143}^{\text{dust}TE}$	0.155	$0.15^{+0.11}_{-0.11}$	Age/Gyr	13.816	$13.72^{+0.15}_{-0.19}$
$\tau$	0.0791	$0.085^{+0.035}_{-0.035}$	$A_{143 \times 217}^{\text{dust}TE}$	0.339	$0.34^{+0.16}_{-0.16}$	$z_*$	1090.09	$1090.34^{+0.74}_{-0.72}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.007	$< 0.780$	$A_{217}^{\text{dust}TE}$	1.67	$1.67^{+0.50}_{-0.50}$	$r_*$	144.52	$143.1^{+2.0}_{-2.4}$
$N_{\text{eff}}$	3.046	$< 3.42$	$c_{100}$	0.99822	$0.9981^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04094	$1.04067^{+0.00074}_{-0.00080}$
$\ln(10^{10} A_s)$	3.094	$3.109^{+0.070}_{-0.069}$	$c_{217}$	0.99596	$0.9961^{+0.0028}_{-0.0028}$	$D_A/\text{Gpc}$	13.884	$13.75^{+0.18}_{-0.22}$
$n_s$	0.9637	$0.967^{+0.014}_{-0.013}$	$H_0$	67.17	$67.2^{+2.0}_{-1.8}$	$z_{\text{drag}}$	1059.63	$1060.3^{+1.1}_{-1.0}$
$y_{\text{cal}}$	1.00038	$1.0004^{+0.0048}_{-0.0049}$	$\Omega_\Lambda$	0.6832	$0.675^{+0.026}_{-0.028}$	$r_{\text{drag}}$	147.23	$145.7^{+2.0}_{-2.5}$
$A_{217}^{\text{CIB}}$	66.4	$65^{+10}_{-10}$	$\Omega_m$	0.3168	$0.325^{+0.028}_{-0.026}$	$k_D$	0.14062	$0.1419^{+0.0020}_{-0.0017}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.13	—	$\Omega_m h^2$	0.1429	$0.1465^{+0.0065}_{-0.0056}$	$100\theta_D$	0.16092	$0.16110^{+0.00057}_{-0.00052}$
$A_{143}^{\text{tSZ}}$	7.07	$5.2^{+3.7}_{-3.8}$	$\Omega_\nu h^2$	0.00072	$< 0.00894$	$z_{\text{eq}}$	3398	$3341^{+110}_{-120}$
$A_{100}^{\text{PS}}$	257	$264^{+60}_{-50}$	$\Omega_m h^3$	0.09600	$0.0984^{+0.0042}_{-0.0032}$	$k_{\text{eq}}$	0.010373	$0.01034^{+0.00033}_{-0.00035}$
$A_{143}^{\text{PS}}$	40.9	$46^{+20}_{-20}$	$\sigma_8$	0.832	$0.798^{+0.057}_{-0.064}$	$100\theta_{\text{eq}}$	0.8135	$0.826^{+0.026}_{-0.023}$
$A_{143 \times 217}^{\text{PS}}$	36.7	$41^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4680	$0.455^{+0.028}_{-0.030}$	$100\theta_{\text{s,eq}}$	0.4496	$0.456^{+0.014}_{-0.012}$
$A_{217}^{\text{PS}}$	98.8	$98^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6238	$0.602^{+0.038}_{-0.043}$	$r_{\text{drag}}/D_V(0.57)$	0.07128	$0.0708^{+0.0013}_{-0.0014}$
$A^{\text{kSZ}}$	0.0	—	$\sigma_8/h^{0.5}$	1.015	$0.974^{+0.063}_{-0.072}$	$H(0.57)$	92.82	$93.4^{+1.4}_{-1.1}$
$A_{100}^{\text{dust}TT}$	7.29	$7.5^{+3.7}_{-3.7}$	$\langle d^2 \rangle^{1/2}$	2.512	$2.516^{+0.080}_{-0.079}$	$D_A(0.57)$	1393.5	$1389^{+25}_{-29}$
$A_{143}^{\text{dust}TT}$	8.88	$9.0^{+3.6}_{-3.6}$	$z_{\text{re}}$	10.09	$10.6^{+3.0}_{-3.3}$	$F_{\text{AP}}(0.57)$	0.6774	$0.6794^{+0.0069}_{-0.0065}$
$A_{143 \times 217}^{\text{dust}TT}$	17.4	$17.1^{+8.2}_{-8.2}$	$10^9 A_s$	2.206	$2.24^{+0.16}_{-0.15}$	$f\sigma_8(0.57)$	0.4848	$0.468^{+0.030}_{-0.034}$
$A_{217}^{\text{dust}TT}$	81.9	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8834	$1.891^{+0.027}_{-0.026}$	$\sigma_8(0.57)$	0.6173	$0.591^{+0.046}_{-0.051}$
$A_{100}^{\text{dust}EE}$	0.0810	$0.081^{+0.011}_{-0.011}$	$D_{40}$	1242.8	$1238^{+29}_{-29}$	$f_{2000}^{143}$	29.4	$31^{+6}_{-6}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0486	$0.0487^{+0.0098}_{-0.0099}$	$D_{220}$	5729	$5727^{+77}_{-78}$	$f_{2000}^{143 \times 217}$	32.32	$33^{+4}_{-4}$
$A_{100 \times 217}^{\text{dust}EE}$	0.0996	$0.099^{+0.064}_{-0.063}$	$D_{810}$	2536.4	$2537^{+26}_{-27}$	$f_{2000}^{217}$	105.84	$106.9^{+4.0}_{-3.8}$
$A_{143}^{\text{dust}EE}$	0.1002	$0.100^{+0.014}_{-0.014}$	$D_{1420}$	814.4	$813.4^{+9.6}_{-9.4}$	$\chi_{\text{lowTEB}}^2$	10497.28	$10497.9 (\nu: 3.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.222^{+0.093}_{-0.090}$	$D_{2000}$	230.38	$229.3^{+3.4}_{-3.5}$	$\chi_{\text{plik}}^2$	2431.7	$2453.0 (\nu: 25.2)$
$A_{217}^{\text{dust}EE}$	0.654	$0.65^{+0.25}_{-0.25}$	$n_{\text{s}, 0.002}$	0.9637	$0.967^{+0.014}_{-0.013}$	$\chi_{\text{prior}}^2$	6.7	$19.5 (\nu: 15.3)$
$A_{100}^{\text{dust}TE}$	0.142	$0.141^{+0.075}_{-0.075}$	$Y_P$	0.24533	$0.2475^{+0.0032}_{-0.0025}$	$\chi_{\text{CMB}}^2$	12928.9	$12951.0 (\nu: 24.1)$

Best-fit  $\chi_{\text{eff}}^2 = 12935.64$ ;  $\bar{\chi}_{\text{eff}}^2 = 12970.44$ ;  $R - 1 = 0.01538$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10497.28 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.66

### 12.3 base\_nnu\_meffsterile\_CamSpecHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02226	$0.02245^{+0.00059}_{-0.00055}$ (+0.0 $\sigma$ )	$\beta_1^1$	-0.17	$-0.1^{+2.0}_{-2.0}$	$r_*$	144.39	$142.4^{+2.9}_{-3.5}$ (+0.1 $\sigma$ )
$\Omega_c h^2$	0.1198	$0.1211^{+0.0084}_{-0.0093}$ (-0.1 $\sigma$ )	$H_0$	67.79	$68.1^{+4.2}_{-3.4}$ (+0.1 $\sigma$ )	$100\theta_*$	1.04108	$1.0407^{+0.0011}_{-0.0012}$ (+0.2 $\sigma$ )
$100\theta_{\text{MC}}$	1.04090	$1.04064^{+0.00099}_{-0.0010}$ (+0.1 $\sigma$ )	$\Omega_\Lambda$	0.6896	$0.682^{+0.042}_{-0.041}$ (+0.1 $\sigma$ )	$z_{\text{drag}}$	1059.67	$1060.5^{+1.7}_{-1.5}$ (-0.0 $\sigma$ )
$\tau$	0.0803	$0.086^{+0.043}_{-0.040}$ (+0.0 $\sigma$ )	$\Omega_m$	0.3104	$0.318^{+0.041}_{-0.042}$ (-0.1 $\sigma$ )	$r_{\text{drag}}$	147.09	$145.1^{+3.0}_{-3.6}$ (+0.1 $\sigma$ )
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.000	< 0.834 (-0.0 $\sigma$ )	$\Omega_m h^2$	0.1427	$0.1472^{+0.0083}_{-0.0074}$ (-0.1 $\sigma$ )	$k_D$	0.14065	$0.1423^{+0.0028}_{-0.0024}$ (-0.1 $\sigma$ )
$N_{\text{eff}}$	3.085	< 3.67 (-0.0 $\sigma$ )	$\Omega_\nu h^2$	0.00065	< 0.00951 (-0.0 $\sigma$ )	$100\theta_D$	0.16105	$0.1613^{+0.0010}_{-0.00090}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.091	$3.110^{+0.088}_{-0.080}$ (-0.0 $\sigma$ )	$\Omega_m h^3$	0.0967	< 0.108 (-0.0 $\sigma$ )	$z_{\text{eq}}$	3376	$3320^{+130}_{-140}$ (-0.0 $\sigma$ )
$n_s$	0.9689	$0.975^{+0.024}_{-0.021}$ (+0.2 $\sigma$ )	$\sigma_8$	0.830	$0.801^{+0.068}_{-0.074}$ (+0.0 $\sigma$ )	$100\theta_{\text{eq}}$	0.8177	$0.830^{+0.030}_{-0.028}$ (+0.0 $\sigma$ )
$y_{\text{cal}}$	1.00006	$1.0004^{+0.0049}_{-0.0048}$ (+0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4626	$0.451^{+0.033}_{-0.034}$ (-0.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07164	$0.0712^{+0.0022}_{-0.0021}$ (+0.1 $\sigma$ )
$A_{100}^{\text{PS}}$	252.3	$251^{+40}_{-50}$ (-0.5 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6197	$0.601^{+0.043}_{-0.047}$ (-0.0 $\sigma$ )	$H(0.57)$	93.23	$94.2^{+3.1}_{-2.2}$ (+0.0 $\sigma$ )
$A_{143}^{\text{PS}}$	36.2	$42^{+20}_{-20}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	1.008	$0.970^{+0.069}_{-0.077}$ (-0.0 $\sigma$ )	$D_A(0.57)$	1384	$1375^{+49}_{-62}$ (-0.0 $\sigma$ )
$A_{217}^{\text{PS}}$	94.7	$97^{+30}_{-30}$ (+0.0 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.487	$2.49^{+0.10}_{-0.096}$ (-0.2 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6758	$0.678^{+0.010}_{-0.010}$ (-0.1 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.5	$47^{+10}_{-10}$ (-2.6 $\sigma$ )	$z_{\text{re}}$	10.19	$10.7^{+3.6}_{-3.8}$ (+0.0 $\sigma$ )	$f\sigma_8(0.57)$	0.4824	$0.468^{+0.035}_{-0.038}$ (-0.0 $\sigma$ )
$A_{143}^{\text{tSZ}}$	2.65	< 6.36 (-0.9 $\sigma$ )	$10^9 A_s$	2.201	$2.25^{+0.20}_{-0.19}$ (-0.0 $\sigma$ )	$\sigma_8(0.57)$	0.618	$0.595^{+0.057}_{-0.062}$ (+0.0 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.399	$0.51^{+0.21}_{-0.20}$	$10^9 A_s e^{-2\tau}$	1.8745	$1.888^{+0.035}_{-0.034}$ (-0.3 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.24678	< 0.254 (-0.2 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$D_{40}$	1226.4	$1220^{+37}_{-38}$ (-0.4 $\sigma$ )	$f_{2000}^{143}$	29.9	$31^{+6}_{-6}$ (-0.4 $\sigma$ )
$A^{\text{kSZ}}$	6.0	—	$D_{220}$	5693	$5700^{+80}_{-80}$ (-0.4 $\sigma$ )	$f_{2000}^{217}$	107.10	$107.7^{+4.4}_{-4.4}$ (+0.1 $\sigma$ )
$A_{100}^{\text{dust}}$	0.985	$0.99^{+0.38}_{-0.38}$	$D_{810}$	2527.6	$2533^{+28}_{-27}$ (-0.2 $\sigma$ )	$f_{2000}^{143 \times 217}$	32.22	$33^{+5}_{-5}$ (-0.3 $\sigma$ )
$A_{143}^{\text{dust}}$	1.036	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	812.6	$813^{+10}_{-10}$ (+0.1 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10495.8	$10496.5 (\nu: 3.6)$ (-0.2 $\sigma$ )
$A_{217}^{\text{dust}}$	1.227	$1.21^{+0.23}_{-0.22}$	$n_{\text{s}, 0.002}$	0.9689	$0.975^{+0.024}_{-0.021}$ (+0.2 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	8044.7	$8062.3 (\nu: 20.3)$
$A_{143 \times 217}^{\text{dust}}$	0.965	$0.99^{+0.35}_{-0.35}$	$Y_{\text{P}}$	0.24545	< 0.253 (-0.2 $\sigma$ )	$\chi_{\text{prior}}^2$	3.8	$8.4 (\nu: 6.1)$ (+0.3 $\sigma$ )
$c_{100}$	0.99659	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	Age/Gyr	13.768	$13.62^{+0.28}_{-0.39}$ (+0.0 $\sigma$ )	$\chi_{\text{CMB}}^2$	18540.6	$18558.8 (\nu: 19.3)$ (+1210.4 $\sigma$ )
$c_{217}$	0.99762	$0.9974^{+0.0035}_{-0.0034}$ (+0.9 $\sigma$ )	$z_*$	1090.06	$1090.3^{+1.0}_{-0.94}$ (-0.2 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 18544.40$ ;  $\Delta\chi_{\text{eff}}^2 = 7282.42$ ;  $\bar{\chi}_{\text{eff}}^2 = 18567.20$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7282.41$ ;  $R - 1 = 0.03400$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.84 ( $\Delta$  -0.36) CamSpec like\_v9.10CMH\_unified: 8044.73

## 12.4 base\_nnu\_meffsterile\_CamSpecHM\_TT\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02249^{+0.00056}_{-0.00054}$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_*$	$142.4^{+3.0}_{-3.5}$
$\Omega_c h^2$	$0.1212^{+0.0086}_{-0.0093}$	$H_0$	$68.5^{+3.8}_{-3.2}$	$100\theta_*$	$1.0407^{+0.0011}_{-0.0012}$
$100\theta_{\text{MC}}$	$1.0407^{+0.0010}_{-0.0011}$	$\Omega_\Lambda$	$0.687^{+0.037}_{-0.036}$	$z_{\text{drag}}$	$1060.6^{+1.7}_{-1.5}$
$\tau$	$0.089^{+0.042}_{-0.040}$	$\Omega_m$	$0.313^{+0.036}_{-0.037}$	$r_{\text{drag}}$	$145.0^{+3.1}_{-3.6}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	$< 0.767$	$\Omega_m h^2$	$0.1469^{+0.0081}_{-0.0073}$	$k_D$	$0.1423^{+0.0028}_{-0.0025}$
$N_{\text{eff}}$	$< 3.69$	$\Omega_\nu h^2$	$< 0.00880$	$100\theta_D$	$0.1614^{+0.0010}_{-0.00094}$
$\ln(10^{10} A_s)$	$3.115^{+0.085}_{-0.080}$	$\Omega_m h^3$	$0.1007^{+0.0074}_{-0.0060}$	$z_{\text{eq}}$	$3314^{+130}_{-130}$
$n_s$	$0.977^{+0.022}_{-0.021}$	$\sigma_8$	$0.806^{+0.064}_{-0.070}$	$100\theta_{\text{eq}}$	$0.831^{+0.028}_{-0.027}$
$y_{\text{cal}}$	$1.0004^{+0.0048}_{-0.0048}$	$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.032}_{-0.033}$	$r_{\text{drag}}/D_V(0.57)$	$0.0715^{+0.0020}_{-0.0019}$
$A_{100}^{\text{PS}}$	$251^{+40}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	$0.603^{+0.041}_{-0.046}$	$H(0.57)$	$94.4^{+3.0}_{-2.3}$
$A_{143}^{\text{PS}}$	$42^{+20}_{-20}$	$\sigma_8/h^{0.5}$	$0.974^{+0.065}_{-0.074}$	$D_A(0.57)$	$1368^{+47}_{-57}$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30}$	$\langle d^2 \rangle^{1/2}$	$2.482^{+0.094}_{-0.095}$	$F_{\text{AP}}(0.57)$	$0.6764^{+0.0091}_{-0.0087}$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10}$	$z_{\text{re}}$	$10.9^{+3.5}_{-3.7}$	$f\sigma_8(0.57)$	$0.470^{+0.033}_{-0.037}$
$A_{143}^{\text{tSZ}}$	$< 6.33$	$10^9 A_s$	$2.26^{+0.20}_{-0.19}$	$\sigma_8(0.57)$	$0.600^{+0.052}_{-0.058}$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.21}_{-0.21}$	$10^9 A_s e^{-2\tau}$	$1.887^{+0.035}_{-0.034}$	$Y_{\text{P}}^{\text{BBN}}$	$< 0.255$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1216^{+36}_{-36}$	$f_{2000}^{143}$	$31^{+6}_{-6}$
$A^{\text{kSZ}}$	—	$D_{220}$	$5702^{+80}_{-80}$	$f_{2000}^{217}$	$107.7^{+4.4}_{-4.4}$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{810}$	$2534^{+28}_{-27}$	$f_{2000}^{143 \times 217}$	$33^{+5}_{-5}$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	$813^{+10}_{-9.9}$	$\chi_{\text{lowTEB}}^2$	$10496.4 (\nu: 3.8)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.22}$	$n_{s,0.002}$	$0.977^{+0.022}_{-0.021}$	$\chi_{\text{CamSpec}}^2$	$8062.3 (\nu: 20.5)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$Y_{\text{P}}$	$< 0.253$	$\chi_{\text{H070p6}}^2$	$0.65 (\nu: 0.2)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019}$	Age/Gyr	$13.59^{+0.29}_{-0.38}$	$\chi_{\text{prior}}^2$	$8.4 (\nu: 6.1)$
$c_{217}$	$0.9974^{+0.0034}_{-0.0035}$	$z_*$	$1090.3^{+1.0}_{-0.93}$	$\chi_{\text{CMB}}^2$	$18558.7 (\nu: 19.0)$

$$\bar{\chi}_{\text{eff}}^2 = 18567.78; R - 1 = 0.03045$$



## 12.5 base\_nnu\_meffsterile\_CamSpecHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022364	$0.02246^{+0.00035}_{-0.00033}$ (+0.5 $\sigma$ )	$\mathcal{C}_{EE}$	1.0007	$1.0015^{+0.0088}_{-0.0085}$	$r_*$	144.68	$143.4^{+1.8}_{-2.2}$ (+0.3 $\sigma$ )
$\Omega_c h^2$	0.1187	$0.1187^{+0.0065}_{-0.0078}$ (-0.5 $\sigma$ )	$\beta_1^1$	-0.19	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	1.04101	$1.04079^{+0.00070}_{-0.00075}$ (+0.3 $\sigma$ )
$100\theta_{\text{MC}}$	1.04081	$1.04066^{+0.00063}_{-0.00070}$ (+0.3 $\sigma$ )	$H_0$	67.64	$67.4^{+1.7}_{-1.7}$ (+0.3 $\sigma$ )	$z_{\text{drag}}$	1059.86	$1060.4^{+1.0}_{-0.97}$ (+0.2 $\sigma$ )
$\tau$	0.0784	$0.081^{+0.036}_{-0.034}$ (-0.2 $\sigma$ )	$\Omega_\Lambda$	0.6895	$0.680^{+0.025}_{-0.027}$ (+0.4 $\sigma$ )	$r_{\text{drag}}$	147.35	$146.0^{+1.9}_{-2.3}$ (+0.2 $\sigma$ )
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.037	< 0.859 (+0.2 $\sigma$ )	$\Omega_m$	0.3105	$0.320^{+0.027}_{-0.025}$ (-0.4 $\sigma$ )	$k_D$	0.14061	$0.1417^{+0.0019}_{-0.0016}$ (-0.1 $\sigma$ )
$N_{\text{eff}}$	3.047	< 3.38 (-0.2 $\sigma$ )	$\Omega_m h^2$	0.1421	$0.1455^{+0.0063}_{-0.0054}$ (-0.3 $\sigma$ )	$100\theta_D$	0.16076	$0.16091^{+0.00054}_{-0.00051}$ (-0.7 $\sigma$ )
$\ln(10^{10} A_s)$	3.087	$3.097^{+0.071}_{-0.067}$ (-0.3 $\sigma$ )	$\Omega_\nu h^2$	0.00103	< 0.00977 (+0.2 $\sigma$ )	$z_{\text{eq}}$	3370	$3315^{+120}_{-140}$ (-0.5 $\sigma$ )
$n_s$	0.9678	$0.969^{+0.012}_{-0.012}$ (+0.4 $\sigma$ )	$\Omega_m h^3$	0.09610	$0.0981^{+0.0036}_{-0.0027}$ (-0.2 $\sigma$ )	$100\theta_{\text{eq}}$	0.8192	$0.832^{+0.030}_{-0.025}$ (+0.5 $\sigma$ )
$y_{\text{cal}}$	1.00042	$1.0003^{+0.0048}_{-0.0049}$ (-0.0 $\sigma$ )	$\sigma_8$	0.826	$0.788^{+0.058}_{-0.065}$ (-0.3 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07161	$0.0711^{+0.0013}_{-0.0015}$ (+0.3 $\sigma$ )
$A_{100}^{\text{PS}}$	246.3	$247^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4601	$0.446^{+0.028}_{-0.031}$ (-0.6 $\sigma$ )	$H(0.57)$	93.03	$93.4^{+1.1}_{-0.93}$ (+0.0 $\sigma$ )
$A_{143}^{\text{PS}}$	34.4	$40^{+10}_{-20}$ (-0.7 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6163	$0.592^{+0.039}_{-0.044}$ (-0.5 $\sigma$ )	$D_A(0.57)$	1387.0	$1386^{+22}_{-24}$ (-0.2 $\sigma$ )
$A_{217}^{\text{PS}}$	97.4	$98^{+30}_{-30}$ (+0.0 $\sigma$ )	$\sigma_8/h^{0.5}$	1.004	$0.959^{+0.065}_{-0.074}$ (-0.4 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6758	$0.6782^{+0.0067}_{-0.0062}$ (-0.4 $\sigma$ )
$A_{217}^{\text{CIB}}$	46.7	$46^{+10}_{-10}$ (-2.8 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.484	$2.490^{+0.080}_{-0.077}$ (-0.7 $\sigma$ )	$f\sigma_8(0.57)$	0.4798	$0.461^{+0.031}_{-0.035}$ (-0.4 $\sigma$ )
$A_{143}^{\text{tSZ}}$	3.62	< 6.60 (-1.0 $\sigma$ )	$z_{\text{re}}$	9.97	$10.2^{+3.2}_{-3.2}$ (-0.2 $\sigma$ )	$\sigma_8(0.57)$	0.6145	$0.584^{+0.047}_{-0.052}$ (-0.3 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.420	$0.52^{+0.22}_{-0.20}$	$10^9 A_s$	2.192	$2.21^{+0.16}_{-0.14}$ (-0.3 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.24631	< 0.251 (-0.4 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8737	$1.881^{+0.027}_{-0.026}$ (-0.7 $\sigma$ )	$f_{2000}^{143}$	28.5	$30^{+6}_{-6}$ (-0.5 $\sigma$ )
$A^{\text{kSZ}}$	4.5	—	$D_{40}$	1229.2	$1227^{+27}_{-27}$ (-0.8 $\sigma$ )	$f_{2000}^{217}$	106.11	$106.9^{+4.0}_{-3.9}$ (+0.0 $\sigma$ )
$A_{100}^{\text{dust}}$	0.9996	$0.99^{+0.38}_{-0.38}$	$D_{220}$	5712	$5710^{+75}_{-77}$ (-0.4 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.09	$32^{+4}_{-4}$ (-0.5 $\sigma$ )
$A_{143}^{\text{dust}}$	1.023	$1.02^{+0.36}_{-0.36}$	$D_{810}$	2530.5	$2531^{+27}_{-27}$ (-0.4 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10495.86	$10496.6$ ( $\nu$ : 2.5) (-0.5 $\sigma$ )
$A_{217}^{\text{dust}}$	1.223	$1.21^{+0.23}_{-0.23}$	$D_{1420}$	814.6	$813.7^{+9.6}_{-9.6}$ (+0.1 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	12935.8	$12954.7$ ( $\nu$ : 20.7)
$A_{143 \times 217}^{\text{dust}}$	0.966	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	0.9678	$0.969^{+0.012}_{-0.012}$ (+0.4 $\sigma$ )	$\chi_{\text{prior}}^2$	3.6	$9.0$ ( $\nu$ : 6.4) (-1.9 $\sigma$ )
$c_{100}$	0.99674	$0.9968^{+0.0019}_{-0.0019}$ (-1.8 $\sigma$ )	$Y_{\text{P}}$	0.24498	< 0.249 (-0.4 $\sigma$ )	$\chi_{\text{CMB}}^2$	23431.6	$23451.3$ ( $\nu$ : 20.5) (+1513.4 $\sigma$ )
$c_{217}$	0.99719	$0.9972^{+0.0034}_{-0.0034}$ (+0.8 $\sigma$ )	Age/Gyr	13.797	$13.72^{+0.12}_{-0.16}$ (+0.1 $\sigma$ )			
$\mathcal{C}_{TE}$	1.0038	$1.0046^{+0.0089}_{-0.0088}$	$z_*$	1089.83	$1090.08^{+0.72}_{-0.70}$ (-0.7 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 23435.21$ ;  $\Delta\chi_{\text{eff}}^2 = 10499.57$ ;  $\bar{\chi}_{\text{eff}}^2 = 23460.36$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 10489.91$ ;  $R - 1 = 0.01557$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.86 ( $\Delta$  -1.42) CamSpec like.v9.10CMH\_unified: 12935.76

## 12.6 base\_nnu\_meffsterile\_CamSpecHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02248^{+0.00034}_{-0.00033}$	$\mathcal{C}_{EE}$	$1.0016^{+0.0087}_{-0.0085}$	$r_*$	$143.4^{+1.8}_{-2.2}$
$\Omega_c h^2$	$0.1186^{+0.0066}_{-0.0079}$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.04081^{+0.00070}_{-0.00075}$
$100\theta_{MC}$	$1.04068^{+0.00064}_{-0.00070}$	$H_0$	$67.6^{+1.7}_{-1.7}$	$z_{drag}$	$1060.4^{+1.0}_{-0.96}$
$\tau$	$0.083^{+0.036}_{-0.034}$	$\Omega_\Lambda$	$0.682^{+0.024}_{-0.026}$	$r_{drag}$	$146.1^{+1.8}_{-2.3}$
$m_{\nu, sterile}^{eff}$	$< 0.831$	$\Omega_m$	$0.318^{+0.026}_{-0.024}$	$k_D$	$0.1417^{+0.0019}_{-0.0016}$
$N_{eff}$	$< 3.38$	$\Omega_m h^2$	$0.1452^{+0.0061}_{-0.0052}$	$100\theta_D$	$0.16090^{+0.00056}_{-0.00053}$
$\ln(10^{10} A_s)$	$3.099^{+0.071}_{-0.067}$	$\Omega_\nu h^2$	$< 0.00948$	$z_{eq}$	$3312^{+120}_{-140}$
$n_s$	$0.970^{+0.013}_{-0.012}$	$\Omega_m h^3$	$0.0981^{+0.0036}_{-0.0028}$	$100\theta_{eq}$	$0.832^{+0.031}_{-0.025}$
$y_{cal}$	$1.0004^{+0.0048}_{-0.0049}$	$\sigma_8$	$0.791^{+0.058}_{-0.064}$	$r_{drag}/D_V(0.57)$	$0.0712^{+0.0012}_{-0.0014}$
$A_{100}^{PS}$	$247^{+40}_{-40}$	$\sigma_8 \Omega_m^{0.5}$	$0.446^{+0.028}_{-0.031}$	$H(0.57)$	$93.5^{+1.3}_{-0.99}$
$A_{143}^{PS}$	$40^{+10}_{-10}$	$\sigma_8 \Omega_m^{0.25}$	$0.594^{+0.038}_{-0.043}$	$D_A(0.57)$	$1384^{+23}_{-25}$
$A_{217}^{PS}$	$98^{+30}_{-30}$	$\sigma_8/h^{0.5}$	$0.962^{+0.064}_{-0.072}$	$F_{AP}(0.57)$	$0.6776^{+0.0065}_{-0.0060}$
$A_{217}^{CIB}$	$46^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	$2.488^{+0.079}_{-0.077}$	$f\sigma_8(0.57)$	$0.462^{+0.031}_{-0.034}$
$A_{143}^{tSZ}$	$< 6.65$	$z_{re}$	$10.3^{+3.2}_{-3.2}$	$\sigma_8(0.57)$	$0.587^{+0.046}_{-0.051}$
$r_{143 \times 217}^{PS}$	$0.52^{+0.22}_{-0.20}$	$10^9 A_s$	$2.22^{+0.16}_{-0.15}$	$Y_P^{BBN}$	$< 0.251$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.880^{+0.027}_{-0.026}$	$f_{2000}^{143}$	$29^{+6}_{-6}$
$A^{kSZ}$	—	$D_{40}$	$1226^{+27}_{-27}$	$f_{2000}^{217}$	$106.8^{+4.0}_{-3.9}$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.37}$	$D_{220}$	$5712^{+75}_{-77}$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2531^{+27}_{-27}$	$\chi_{lowTEB}^2$	$10496.6 (\nu: 2.6)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$D_{1420}$	$813.9^{+9.5}_{-9.5}$	$\chi_{CamSpec}^2$	$12954.7 (\nu: 20.8)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.970^{+0.013}_{-0.012}$	$\chi_{H070p6}^2$	$0.86 (\nu: 0.1)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019}$	$Y_P$	$< 0.249$	$\chi_{prior}^2$	$9.0 (\nu: 6.4)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0034}$	$Age/Gyr$	$13.72^{+0.13}_{-0.17}$	$\chi_{CMB}^2$	$23451.3 (\nu: 20.2)$
$c_{TE}$	$1.0045^{+0.0089}_{-0.0089}$	$z_*$	$1090.03^{+0.71}_{-0.69}$		

$$\bar{\chi}_{eff}^2 = 23461.11; R - 1 = 0.01607$$

## 12.7 base\_nnu\_meffsterile\_plikHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02231	$0.02246^{+0.00058}_{-0.00057}$	$\Omega_m$	0.3067	$0.314^{+0.038}_{-0.037}$	$D_A/\text{Gpc}$	13.894	$13.67^{+0.29}_{-0.33}$
$\Omega_c h^2$	0.1187	$0.1216^{+0.0072}_{-0.0074}$	$\Omega_m h^2$	0.1418	$0.1472^{+0.0081}_{-0.0075}$	$z_{\text{drag}}$	1059.70	$1060.6^{+1.7}_{-1.6}$
$100\theta_{\text{MC}}$	1.04103	$1.0407^{+0.0010}_{-0.0010}$	$\Omega_\nu h^2$	0.00078	$< 0.00709$	$r_{\text{drag}}$	147.36	$144.9^{+3.2}_{-3.6}$
$\tau$	0.0690	$0.078^{+0.041}_{-0.037}$	$\Omega_m h^3$	0.0964	$0.1009^{+0.0079}_{-0.0063}$	$k_D$	0.14044	$0.1423^{+0.0028}_{-0.0025}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.013	$< 0.607$	$\sigma_8$	0.815	$0.795^{+0.055}_{-0.060}$	$100\theta_D$	0.16100	$0.1615^{+0.0010}_{-0.00093}$
$N_{\text{eff}}$	3.073	$< 3.72$	$\sigma_8 \Omega_m^{0.5}$	0.4513	$0.445^{+0.022}_{-0.023}$	$z_{\text{eq}}$	3358	$3315^{+100}_{-110}$
$\ln(10^{10} A_s)$	3.069	$3.095^{+0.082}_{-0.078}$	$\sigma_8 \Omega_m^{0.25}$	0.6064	$0.595^{+0.029}_{-0.033}$	$k_{\text{eq}}$	0.010268	$0.01033^{+0.00032}_{-0.00034}$
$n_s$	0.9695	$0.976^{+0.023}_{-0.021}$	$\sigma_8/h^{0.5}$	0.988	$0.960^{+0.048}_{-0.056}$	$100\theta_{\text{eq}}$	0.8212	$0.831^{+0.023}_{-0.022}$
$y_{\text{cal}}$	0.999999	$1.0003^{+0.0049}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.449	$2.456^{+0.058}_{-0.058}$	$100\theta_{s, \text{eq}}$	0.4536	$0.458^{+0.012}_{-0.011}$
$A_{217}^{\text{CIB}}$	67.8	$66^{+10}_{-10}$	$z_{\text{re}}$	9.12	$9.96^{+3.5}_{-3.6}$	$r_{\text{drag}}/D_V(0.57)$	0.07185	$0.0715^{+0.0022}_{-0.0020}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.151	$2.21^{+0.18}_{-0.17}$	$H(0.57)$	93.25	$94.5^{+3.1}_{-2.4}$
$A_{143}^{\text{tSZ}}$	7.17	$4.7^{+3.9}_{-4.0}$	$10^9 A_s e^{-2\tau}$	1.8740	$1.890^{+0.035}_{-0.031}$	$D_A(0.57)$	1382	$1368^{+49}_{-60}$
$A_{100}^{\text{PS}}$	254	$266^{+50}_{-60}$	$D_{40}$	1222.6	$1215^{+32}_{-33}$	$F_{\text{AP}}(0.57)$	0.6748	$0.6765^{+0.0095}_{-0.0096}$
$A_{143}^{\text{PS}}$	39.5	$48^{+20}_{-20}$	$D_{220}$	5714	$5718^{+82}_{-80}$	$f\sigma_8(0.57)$	0.4727	$0.463^{+0.025}_{-0.028}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$D_{810}$	2532.5	$2536^{+28}_{-27}$	$\sigma_8(0.57)$	0.6074	$0.591^{+0.045}_{-0.052}$
$A_{217}^{\text{PS}}$	96.6	$96^{+20}_{-20}$	$D_{1420}$	814.6	$813^{+10}_{-9.9}$	$f_{2000}^{143}$	30.1	$33^{+6}_{-6}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.13	$228.4^{+3.9}_{-4.0}$	$f_{2000}^{143 \times 217}$	32.66	$35^{+5}_{-4}$
$A_{100}^{\text{dustTT}}$	7.51	$7.6^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9695	$0.976^{+0.023}_{-0.021}$	$f_{2000}^{217}$	106.13	$107.9^{+4.5}_{-4.3}$
$A_{143}^{\text{dustTT}}$	9.13	$9.1^{+3.6}_{-3.6}$	$Y_P$	0.24573	$0.2492^{+0.0054}_{-0.0045}$	$\chi_{\text{lensing}}^2$	9.17	$9.9 (\nu: 1.1)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.4^{+8.1}_{-8.2}$	$Y_P^{\text{BBN}}$	0.24706	$0.2506^{+0.0054}_{-0.0045}$	$\chi_{\text{lowTEB}}^2$	10494.78	$10495.3 (\nu: 1.3)$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$10^5 D/H$	2.613	$2.67^{+0.12}_{-0.12}$	$\chi_{\text{plik}}^2$	766.3	$781.9 (\nu: 17.3)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.773	$13.58^{+0.30}_{-0.39}$	$\chi_{\text{prior}}^2$	2.1	$7.5 (\nu: 6.5)$
$c_{217}$	0.99600	$0.9962^{+0.0029}_{-0.0029}$	$z_*$	1089.92	$1090.4^{+1.0}_{-0.94}$	$\chi_{\text{CMB}}^2$	11270.2	$11287.1 (\nu: 17.4)$
$H_0$	68.00	$68.6^{+4.0}_{-3.4}$	$r_*$	144.67	$142.3^{+3.1}_{-3.5}$			
$\Omega_\Lambda$	0.6933	$0.686^{+0.037}_{-0.038}$	$100\theta_*$	1.04121	$1.0407^{+0.0011}_{-0.0012}$			

Best-fit  $\chi_{\text{eff}}^2 = 11272.33$ ;  $\bar{\chi}_{\text{eff}}^2 = 11294.59$ ;  $R - 1 = 0.00725$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.17 lowl.SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.78 plik\_dx11dr2\_HM\_v18.TT: 766.28

## 12.8 base\_nnu\_meffsterile\_plikHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022271	$0.02236^{+0.00036}_{-0.00034}$	$A_{100 \times 217}^{\text{dust}TE}$	0.305	$0.30^{+0.16}_{-0.17}$	Age/Gyr	13.805	$13.71^{+0.14}_{-0.18}$
$\Omega_c h^2$	0.1192	$0.1204^{+0.0052}_{-0.0058}$	$A_{143}^{\text{dust}TE}$	0.155	$0.15^{+0.11}_{-0.10}$	$z_*$	1089.98	$1090.32^{+0.76}_{-0.68}$
$100\theta_{\text{MC}}$	1.04086	$1.04063^{+0.00070}_{-0.00075}$	$A_{143 \times 217}^{\text{dust}TE}$	0.335	$0.34^{+0.16}_{-0.16}$	$r_*$	144.70	$143.1^{+2.0}_{-2.3}$
$\tau$	0.0632	$0.069^{+0.030}_{-0.029}$	$A_{217}^{\text{dust}TE}$	1.663	$1.67^{+0.49}_{-0.50}$	$100\theta_*$	1.04106	$1.04075^{+0.00074}_{-0.00082}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.002	< 0.641	$c_{100}$	0.99818	$0.9981^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.900	$13.75^{+0.19}_{-0.22}$
$N_{\text{eff}}$	3.048	< 3.42	$c_{217}$	0.99611	$0.9962^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.67	$1060.2^{+1.1}_{-1.0}$
$\ln(10^{10} A_s)$	3.059	$3.075^{+0.059}_{-0.056}$	$H_0$	67.54	$67.3^{+1.9}_{-1.8}$	$r_{\text{drag}}$	147.40	$145.8^{+2.1}_{-2.4}$
$n_s$	0.9658	$0.968^{+0.013}_{-0.013}$	$\Omega_\Lambda$	0.6884	$0.677^{+0.026}_{-0.028}$	$k_D$	0.14046	$0.1418^{+0.0020}_{-0.0017}$
$y_{\text{cal}}$	1.00003	$1.0002^{+0.0049}_{-0.0047}$	$\Omega_m$	0.3116	$0.323^{+0.028}_{-0.026}$	$100\theta_D$	0.16092	$0.16114^{+0.00056}_{-0.00051}$
$A_{217}^{\text{CIB}}$	67.9	$66^{+10}_{-10}$	$\Omega_m h^2$	0.1421	$0.1463^{+0.0065}_{-0.0057}$	$z_{\text{eq}}$	3380	$3341^{+88}_{-93}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_\nu h^2$	0.00067	< 0.00746	$k_{\text{eq}}$	0.010317	$0.01033^{+0.00027}_{-0.00029}$
$A_{143}^{\text{tSZ}}$	7.31	$5.0^{+3.8}_{-3.8}$	$\Omega_m h^3$	0.09600	$0.0985^{+0.0040}_{-0.0032}$	$100\theta_{\text{eq}}$	0.8170	$0.826^{+0.020}_{-0.018}$
$A_{100}^{\text{PS}}$	258	$266^{+50}_{-50}$	$\sigma_8$	0.815	$0.785^{+0.047}_{-0.053}$	$100\theta_{\text{s,eq}}$	0.4514	$0.456^{+0.010}_{-0.0094}$
$A_{143}^{\text{PS}}$	38.7	$46^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4546	$0.446^{+0.020}_{-0.022}$	$r_{\text{drag}}/D_V(0.57)$	0.07157	$0.0709^{+0.0013}_{-0.0015}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6085	$0.591^{+0.029}_{-0.032}$	$H(0.57)$	92.97	$93.4^{+1.3}_{-1.1}$
$A_{217}^{\text{PS}}$	96.3	$96^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.991	$0.956^{+0.049}_{-0.057}$	$D_A(0.57)$	1388.6	$1387^{+25}_{-27}$
$A^{\text{kSZ}}$	0.0	—	$\langle d^2 \rangle^{1/2}$	2.454	$2.468^{+0.055}_{-0.052}$	$F_{\text{AP}}(0.57)$	0.6761	$0.6789^{+0.0068}_{-0.0065}$
$A_{100}^{\text{dust}TT}$	7.54	$7.6^{+3.6}_{-3.7}$	$z_{\text{re}}$	8.57	$9.1^{+2.7}_{-2.9}$	$f\sigma_8(0.57)$	0.4736	$0.459^{+0.024}_{-0.027}$
$A_{143}^{\text{dust}TT}$	9.10	$9.1^{+3.6}_{-3.6}$	$10^9 A_s$	2.130	$2.17^{+0.13}_{-0.13}$	$\sigma_8(0.57)$	0.6059	$0.581^{+0.039}_{-0.043}$
$A_{143 \times 217}^{\text{dust}TT}$	17.7	$17.3^{+8.1}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8771	$1.887^{+0.027}_{-0.025}$	$f_{2000}^{143}$	29.9	$32^{+6}_{-5}$
$A_{217}^{\text{dust}TT}$	82.0	$82^{+10}_{-10}$	$D_{40}$	1229.6	$1227^{+26}_{-26}$	$f_{2000}^{143 \times 217}$	32.59	$34^{+4}_{-4}$
$A_{100}^{\text{dust}EE}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5722	$5721^{+78}_{-75}$	$f_{2000}^{217}$	106.07	$107.3^{+4.0}_{-3.8}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0490	$0.0490^{+0.0097}_{-0.0098}$	$D_{810}$	2534.0	$2535^{+27}_{-26}$	$\chi_{\text{lensing}}^2$	9.73	$10.5 (\nu: 1.6)$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.099^{+0.064}_{-0.064}$	$D_{1420}$	814.6	$813.3^{+9.5}_{-9.3}$	$\chi_{\text{lowTEB}}^2$	10495.29	$10495.7 (\nu: 0.8)$
$A_{143}^{\text{dust}EE}$	0.1004	$0.100^{+0.014}_{-0.013}$	$D_{2000}$	230.09	$228.8^{+3.4}_{-3.5}$	$\chi_{\text{plik}}^2$	2434.9	$2455.8 (\nu: 24.6)$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.223^{+0.092}_{-0.092}$	$n_{\text{s}, 0.002}$	0.9658	$0.968^{+0.013}_{-0.013}$	$\chi_{\text{prior}}^2$	7.1	$19.7 (\nu: 15.5)$
$A_{217}^{\text{dust}EE}$	0.655	$0.65^{+0.25}_{-0.25}$	$Y_{\text{P}}$	0.24537	$0.2475^{+0.0031}_{-0.0025}$	$\chi_{\text{CMB}}^2$	12940.0	$12961.9 (\nu: 24.2)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.074}_{-0.075}$	$Y_{\text{P}}^{\text{BBN}}$	0.24670	$0.2488^{+0.0031}_{-0.0025}$			
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.057}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.611	$2.647^{+0.079}_{-0.076}$			

Best-fit  $\chi_{\text{eff}}^2 = 12947.05$ ;  $\bar{\chi}_{\text{eff}}^2 = 12981.60$ ;  $R - 1 = 0.01727$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.73 lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.29 plik\_dx11dr2\_HM\_v18.TTTEEE: 2434.94

## 12.9 base\_nnu\_meffsterile\_CamSpecHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02227	$0.02246^{+0.00057}_{-0.00056}$ $(-0.0\sigma)$	$\beta_1^1$	-0.22	$-0.1^{+2.0}_{-1.9}$	$r_*$	144.33	$142.5^{+3.0}_{-3.5}$ $(+0.1\sigma)$
$\Omega_c h^2$	0.1194	$0.1209^{+0.0074}_{-0.0087}$ $(-0.2\sigma)$	$H_0$	67.98	$68.5^{+4.0}_{-3.3}$ $(-0.0\sigma)$	$100\theta_*$	1.04112	$1.0408^{+0.0011}_{-0.0011}$ $(+0.2\sigma)$
$100\theta_{\text{MC}}$	1.04094	$1.0407^{+0.0010}_{-0.0010}$ $(+0.1\sigma)$	$\Omega_\Lambda$	0.6914	$0.687^{+0.036}_{-0.037}$ $(+0.0\sigma)$	$z_{\text{drag}}$	1059.70	$1060.5^{+1.7}_{-1.6}$ $(-0.1\sigma)$
$\tau$	0.0696	$0.080^{+0.040}_{-0.038}$ $(+0.1\sigma)$	$\Omega_m$	0.3086	$0.313^{+0.037}_{-0.036}$ $(-0.0\sigma)$	$r_{\text{drag}}$	147.03	$145.1^{+3.1}_{-3.6}$ $(+0.1\sigma)$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.029	$< 0.645$ $(+0.1\sigma)$	$\Omega_m h^2$	0.1426	$0.1466^{+0.0081}_{-0.0075}$ $(-0.1\sigma)$	$k_D$	0.14064	$0.1422^{+0.0028}_{-0.0025}$ $(-0.1\sigma)$
$N_{\text{eff}}$	3.109	$< 3.70$ $(-0.1\sigma)$	$\Omega_\nu h^2$	0.00095	$< 0.00750$ $(+0.1\sigma)$	$100\theta_D$	0.16113	$0.1614^{+0.0010}_{-0.00090}$ $(-0.2\sigma)$
$\ln(10^{10} A_s)$	3.069	$3.096^{+0.081}_{-0.075}$ $(+0.0\sigma)$	$\Omega_m h^3$	0.0970	$< 0.108$ $(-0.1\sigma)$	$z_{\text{eq}}$	3357	$3310^{+120}_{-120}$ $(-0.1\sigma)$
$n_s$	0.9707	$0.978^{+0.024}_{-0.021}$ $(+0.1\sigma)$	$\sigma_8$	0.813	$0.795^{+0.054}_{-0.059}$ $(+0.0\sigma)$	$100\theta_{\text{eq}}$	0.8213	$0.832^{+0.026}_{-0.024}$ $(+0.1\sigma)$
$y_{\text{cal}}$	0.99999	$1.0002^{+0.0048}_{-0.0047}$ $(-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4518	$0.444^{+0.022}_{-0.024}$ $(-0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	0.07175	$0.0715^{+0.0021}_{-0.0020}$ $(+0.0\sigma)$
$A_{100}^{\text{PS}}$	253.7	$252^{+40}_{-40}$ $(-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.6061	$0.594^{+0.029}_{-0.034}$ $(-0.0\sigma)$	$H(0.57)$	93.36	$94.4^{+3.1}_{-2.3}$ $(-0.1\sigma)$
$A_{143}^{\text{PS}}$	36.7	$42^{+20}_{-20}$ $(-0.6\sigma)$	$\sigma_8/h^{0.5}$	0.986	$0.960^{+0.048}_{-0.056}$ $(+0.0\sigma)$	$D_A(0.57)$	1381	$1369^{+47}_{-60}$ $(+0.0\sigma)$
$A_{217}^{\text{PS}}$	94.2	$96^{+30}_{-30}$ $(-0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	2.447	$2.454^{+0.056}_{-0.058}$ $(-0.1\sigma)$	$F_{\text{AP}}(0.57)$	0.6753	$0.6763^{+0.0091}_{-0.0094}$ $(-0.0\sigma)$
$A_{217}^{\text{CIB}}$	48.0	$48^{+10}_{-10}$ $(-2.7\sigma)$	$z_{\text{re}}$	9.21	$10.1^{+3.5}_{-3.3}$ $(+0.1\sigma)$	$f\sigma_8(0.57)$	0.4723	$0.463^{+0.025}_{-0.028}$ $(-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	2.83	$< 6.27$ $(-0.9\sigma)$	$10^9 A_s$	2.152	$2.21^{+0.18}_{-0.16}$ $(+0.0\sigma)$	$\sigma_8(0.57)$	0.6057	$0.592^{+0.045}_{-0.051}$ $(+0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	0.403	$0.51^{+0.21}_{-0.20}$	$10^9 A_s e^{-2\tau}$	1.8727	$1.884^{+0.034}_{-0.030}$ $(-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	0.24710	$< 0.255$ $(-0.3\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1217.2	$1210^{+31}_{-33}$ $(-0.3\sigma)$	$f_{2000}^{143}$	30.4	$31^{+6}_{-6}$ $(-0.5\sigma)$
$A^{\text{kSZ}}$	6.0	—	$D_{220}$	5694	$5696^{+80}_{-78}$ $(-0.5\sigma)$	$f_{2000}^{217}$	107.44	$108.0^{+4.4}_{-4.3}$ $(+0.0\sigma)$
$A_{100}^{\text{dust}}$	1.006	$0.997^{+0.37}_{-0.38}$	$D_{810}$	2527.8	$2532^{+27}_{-27}$ $(-0.3\sigma)$	$f_{2000}^{143 \times 217}$	32.68	$34^{+5}_{-5}$ $(-0.4\sigma)$
$A_{143}^{\text{dust}}$	1.026	$1.03^{+0.35}_{-0.35}$	$D_{1420}$	812.8	$813^{+10}_{-10}$ $(-0.0\sigma)$	$\chi_{\text{lensing}}^2$	8.90	$9.8 (\nu: 0.9)$ $(-0.1\sigma)$
$A_{217}^{\text{dust}}$	1.226	$1.20^{+0.23}_{-0.23}$	$n_{\text{s}, 0.002}$	0.9707	$0.978^{+0.024}_{-0.021}$ $(+0.1\sigma)$	$\chi_{\text{lowTEB}}^2$	10494.41	$10495.0 (\nu: 1.3)$ $(-0.2\sigma)$
$A_{143 \times 217}^{\text{dust}}$	0.976	$0.99^{+0.35}_{-0.35}$	$Y_{\text{P}}$	0.24577	$< 0.253$ $(-0.3\sigma)$	$\chi_{\text{CamSpec}}^2$	8047.1	$8063.4 (\nu: 18.6)$
$c_{100}$	0.99671	$0.9967^{+0.0019}_{-0.0019}$ $(-1.5\sigma)$	Age/Gyr	13.752	$13.60^{+0.29}_{-0.38}$ $(+0.1\sigma)$	$\chi_{\text{prior}}^2$	3.7	$8.4 (\nu: 5.9)$ $(+0.2\sigma)$
$c_{217}$	0.99763	$0.9975^{+0.0035}_{-0.0035}$ $(+0.9\sigma)$	$z_*$	1090.05	$1090.3^{+1.0}_{-0.95}$ $(-0.2\sigma)$	$\chi_{\text{CMB}}^2$	18550.4	$18568.2 (\nu: 18.9)$ $(+1234.6\sigma)$

Best-fit  $\chi_{\text{eff}}^2 = 18554.09$ ;  $\Delta\chi_{\text{eff}}^2 = 7281.76$ ;  $\bar{\chi}_{\text{eff}}^2 = 18576.55$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7281.96$ ;  $R - 1 = 0.03903$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 8.90 ( $\Delta$  -0.27) lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.41 ( $\Delta$  -0.37) CamSpec like\_v9.10CMH\_unified: 8047.10

## 12.10 base\_nnu\_meffsterile\_CamSpecHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022355	$0.02244^{+0.00036}_{-0.00034}$ (+0.5 $\sigma$ )	$\mathcal{C}_{EE}$	1.0014	$1.0023^{+0.0086}_{-0.0084}$	$r_*$	144.79	$143.4^{+1.9}_{-2.2}$ (+0.3 $\sigma$ )
$\Omega_c h^2$	0.1187	$0.1191^{+0.0063}_{-0.0070}$ (-0.5 $\sigma$ )	$\beta_1^1$	-0.01	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	1.04110	$1.04082^{+0.00067}_{-0.00077}$ (+0.2 $\sigma$ )
$100\theta_{\text{MC}}$	1.04090	$1.04069^{+0.00065}_{-0.00069}$ (+0.2 $\sigma$ )	$H_0$	67.81	$67.6^{+1.9}_{-1.8}$ (+0.3 $\sigma$ )	$z_{\text{drag}}$	1059.78	$1060.3^{+1.0}_{-0.97}$ (+0.1 $\sigma$ )
$\tau$	0.0678	$0.070^{+0.028}_{-0.030}$ (+0.1 $\sigma$ )	$\Omega_\Lambda$	0.6920	$0.682^{+0.025}_{-0.026}$ (+0.4 $\sigma$ )	$r_{\text{drag}}$	147.47	$146.1^{+1.9}_{-2.3}$ (+0.2 $\sigma$ )
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.000	< 0.709 (+0.1 $\sigma$ )	$\Omega_m$	0.3080	$0.318^{+0.026}_{-0.025}$ (-0.4 $\sigma$ )	$k_D$	0.14048	$0.1416^{+0.0019}_{-0.0016}$ (-0.2 $\sigma$ )
$N_{\text{eff}}$	3.046	< 3.39 (-0.2 $\sigma$ )	$\Omega_m h^2$	0.1417	$0.1452^{+0.0062}_{-0.0054}$ (-0.3 $\sigma$ )	$100\theta_D$	0.16080	$0.16097^{+0.00059}_{-0.00053}$ (-0.6 $\sigma$ )
$\ln(10^{10} A_s)$	3.063	$3.074^{+0.056}_{-0.057}$ (-0.0 $\sigma$ )	$\Omega_\nu h^2$	0.00065	< 0.00818 (+0.1 $\sigma$ )	$z_{\text{eq}}$	3369	$3321^{+100}_{-120}$ (-0.4 $\sigma$ )
$n_s$	0.9680	$0.970^{+0.013}_{-0.012}$ (+0.4 $\sigma$ )	$\Omega_m h^3$	0.09606	< 0.102 (-0.1 $\sigma$ )	$100\theta_{\text{eq}}$	0.8191	$0.830^{+0.026}_{-0.022}$ (+0.4 $\sigma$ )
$y_{\text{cal}}$	0.99945	$1.0001^{+0.0047}_{-0.0047}$ (-0.0 $\sigma$ )	$\sigma_8$	0.8151	$0.784^{+0.047}_{-0.051}$ (-0.0 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07176	$0.0712^{+0.0013}_{-0.0014}$ (+0.4 $\sigma$ )
$A_{100}^{\text{PS}}$	248.3	$249^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4524	$0.442^{+0.021}_{-0.024}$ (-0.4 $\sigma$ )	$H(0.57)$	93.09	$93.5^{+1.4}_{-1.1}$ (+0.1 $\sigma$ )
$A_{143}^{\text{PS}}$	34.9	$41^{+10}_{-10}$ (-0.7 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6072	$0.588^{+0.029}_{-0.033}$ (-0.2 $\sigma$ )	$D_A(0.57)$	1384.9	$1384^{+25}_{-28}$ (-0.3 $\sigma$ )
$A_{217}^{\text{PS}}$	95.2	$97^{+30}_{-30}$ (+0.1 $\sigma$ )	$\sigma_8/h^{0.5}$	0.990	$0.953^{+0.049}_{-0.057}$ (-0.1 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6752	$0.6776^{+0.0066}_{-0.0063}$ (-0.4 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.5	$47^{+10}_{-10}$ (-2.8 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.449	$2.456^{+0.053}_{-0.052}$ (-0.4 $\sigma$ )	$f\sigma_8(0.57)$	0.4730	$0.458^{+0.024}_{-0.027}$ (-0.1 $\sigma$ )
$A_{143}^{\text{tSZ}}$	3.34	< 6.52 (-1.0 $\sigma$ )	$z_{\text{re}}$	8.99	$9.2^{+2.7}_{-2.9}$ (+0.1 $\sigma$ )	$\sigma_8(0.57)$	0.6072	$0.582^{+0.039}_{-0.042}$ (+0.0 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.409	$0.51^{+0.22}_{-0.20}$	$10^9 A_s$	2.139	$2.16^{+0.12}_{-0.12}$ (-0.0 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.24630	< 0.251 (-0.5 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8676	$1.879^{+0.028}_{-0.025}$ (-0.6 $\sigma$ )	$f_{2000}^{143}$	29.3	$30^{+6}_{-5}$ (-0.5 $\sigma$ )
$A^{\text{kSZ}}$	5.2	—	$D_{40}$	1221.6	$1219^{+24}_{-24}$ (-0.6 $\sigma$ )	$f_{2000}^{217}$	106.45	$107.2^{+4.0}_{-3.9}$ (-0.1 $\sigma$ )
$A_{100}^{\text{dust}}$	0.984	$0.99^{+0.38}_{-0.38}$	$D_{220}$	5701	$5706^{+75}_{-73}$ (-0.4 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.71	$33^{+4}_{-4}$ (-0.6 $\sigma$ )
$A_{143}^{\text{dust}}$	1.039	$1.03^{+0.36}_{-0.35}$	$D_{810}$	2524.9	$2530^{+26}_{-26}$ (-0.4 $\sigma$ )	$\chi_{\text{lensing}}^2$	9.23	$9.96 (\nu: 0.9)$ (-0.3 $\sigma$ )
$A_{217}^{\text{dust}}$	1.213	$1.20^{+0.22}_{-0.23}$	$D_{1420}$	812.9	$813.4^{+9.2}_{-9.2}$ (+0.0 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10494.85	$10495.1 (\nu: 0.7)$ (-0.5 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.969	$0.99^{+0.35}_{-0.35}$	$n_{s,0.002}$	0.9680	$0.970^{+0.013}_{-0.012}$ (+0.4 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	12937.3	$12956.0 (\nu: 20.1)$
$c_{100}$	0.99665	$0.9967^{+0.0019}_{-0.0019}$ (-1.8 $\sigma$ )	$Y_{\text{P}}$	0.24497	< 0.250 (-0.5 $\sigma$ )	$\chi_{\text{prior}}^2$	3.8	$9.0 (\nu: 6.1)$ (-1.9 $\sigma$ )
$c_{217}$	0.99726	$0.9972^{+0.0034}_{-0.0034}$ (+0.7 $\sigma$ )	Age/Gyr	13.794	$13.72^{+0.14}_{-0.18}$ (+0.0 $\sigma$ )	$\chi_{\text{CMB}}^2$	23441.4	$23461.1 (\nu: 20.5)$ (+1510.7 $\sigma$ )
$c_{TE}$	1.0048	$1.0055^{+0.0087}_{-0.0087}$	$z_*$	1089.80	$1090.08^{+0.75}_{-0.74}$ (-0.6 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 23445.27$ ;  $\Delta\chi_{\text{eff}}^2 = 10498.21$ ;  $\bar{\chi}_{\text{eff}}^2 = 23470.18$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 10488.57$ ;  $R - 1 = 0.01430$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.23 ( $\Delta$  -0.50) lowl.SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10494.85 ( $\Delta$  -0.44) CamSpec like\_v9.10CMH.unified: 12937.34

## 12.11 base\_nnu\_meffsterile\_plikHM\_TT\_lowTEB\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022318	$0.02248^{+0.00049}_{-0.00046}$	$\Omega_m h^2$	0.1423	$0.1461^{+0.0074}_{-0.0062}$	$r_{\text{drag}}$	147.16	$145.2^{+3.0}_{-3.8}$
$\Omega_c h^2$	0.1193	$0.1209^{+0.0081}_{-0.0087}$	$\Omega_\nu h^2$	0.00065	$< 0.00672$	$k_D$	0.14063	$0.1421^{+0.0029}_{-0.0024}$
$100\theta_{\text{MC}}$	1.04090	$1.04070^{+0.00095}_{-0.0010}$	$\Omega_m h^3$	0.0967	$0.1004^{+0.0079}_{-0.0059}$	$100\theta_D$	0.16098	$0.1614^{+0.0011}_{-0.00094}$
$\tau$	0.0800	$0.089^{+0.040}_{-0.039}$	$\sigma_8$	0.829	$0.812^{+0.055}_{-0.058}$	$z_{\text{eq}}$	3369	$3316^{+100}_{-110}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.000	$< 0.571$	$\sigma_8 \Omega_m^{0.5}$	0.4603	$0.452^{+0.029}_{-0.031}$	$k_{\text{eq}}$	0.010306	$0.01031^{+0.00036}_{-0.00038}$
$N_{\text{eff}}$	3.081	$< 3.68$	$\sigma_8 \Omega_m^{0.25}$	0.6178	$0.606^{+0.039}_{-0.042}$	$100\theta_{\text{eq}}$	0.8192	$0.831^{+0.024}_{-0.021}$
$\ln(10^{10} A_s)$	3.093	$3.117^{+0.083}_{-0.079}$	$\sigma_8/h^{0.5}$	1.006	$0.980^{+0.060}_{-0.065}$	$100\theta_{s, \text{eq}}$	0.4525	$0.458^{+0.013}_{-0.011}$
$n_s$	0.9692	$0.976^{+0.019}_{-0.017}$	$\langle d^2 \rangle^{1/2}$	2.484	$2.485^{+0.086}_{-0.088}$	$r_{\text{drag}}/D_V(0.57)$	0.07176	$0.07163^{+0.00093}_{-0.00090}$
$y_{\text{cal}}$	1.00040	$1.0004^{+0.0049}_{-0.0049}$	$z_{\text{re}}$	10.14	$11.0^{+3.3}_{-3.6}$	$H(0.57)$	93.29	$94.4^{+2.7}_{-2.0}$
$A_{217}^{\text{CIB}}$	67.3	$65^{+10}_{-10}$	$10^9 A_s$	2.204	$2.26^{+0.19}_{-0.17}$	$D_A(0.57)$	1382.0	$1367^{+35}_{-43}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$10^9 A_s e^{-2\tau}$	1.8783	$1.889^{+0.036}_{-0.033}$	$F_{\text{AP}}(0.57)$	0.67518	$0.6756^{+0.0042}_{-0.0043}$
$A_{143}^{\text{tSZ}}$	7.11	$4.9^{+3.8}_{-3.8}$	$D_{40}$	1229.7	$1222^{+33}_{-35}$	$f\sigma_8(0.57)$	0.4812	$0.473^{+0.031}_{-0.033}$
$A_{100}^{\text{PS}}$	254	$263^{+60}_{-60}$	$D_{220}$	5718	$5722^{+81}_{-79}$	$\sigma_8(0.57)$	0.6177	$0.605^{+0.042}_{-0.045}$
$A_{143}^{\text{PS}}$	38.9	$46^{+20}_{-20}$	$D_{810}$	2534.3	$2536^{+28}_{-27}$	$f_{2000}^{143}$	29.7	$32^{+6}_{-6}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$D_{1420}$	814.9	$813.6^{+9.9}_{-9.9}$	$f_{2000}^{143 \times 217}$	32.31	$34^{+5}_{-4}$
$A_{217}^{\text{PS}}$	96.8	$97^{+20}_{-20}$	$D_{2000}$	230.48	$229.2^{+3.9}_{-4.1}$	$f_{2000}^{217}$	105.91	$107.1^{+4.4}_{-4.2}$
$A^{\text{kSZ}}$	0.0	—	$n_{s, 0.002}$	0.9692	$0.976^{+0.019}_{-0.017}$	$\chi_{\text{lowTEB}}^2$	10496.0	$10496.9 (\nu: 4.1)$
$A_{100}^{\text{dustTT}}$	7.41	$7.5^{+3.7}_{-3.7}$	$Y_{\text{P}}$	0.24585	$0.2487^{+0.0054}_{-0.0041}$	$\chi_{\text{plik}}^2$	764.0	$779.5 (\nu: 19.2)$
$A_{143}^{\text{dustTT}}$	9.09	$9.1^{+3.6}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.24717	$0.2500^{+0.0054}_{-0.0041}$	$\chi_{6\text{DF}}^2$	0.010	$0.073 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.2^{+8.2}_{-8.1}$	$10^5 D/H$	2.613	$2.66^{+0.12}_{-0.11}$	$\chi_{\text{MGS}}^2$	1.41	$1.34 (\nu: 0.2)$
$A_{217}^{\text{dustTT}}$	82.3	$82^{+10}_{-10}$	$\text{Age/Gyr}$	13.764	$13.60^{+0.28}_{-0.36}$	$\chi_{\text{DR11CMass}}^2$	2.41	$3.04 (\nu: 0.4)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1089.96	$1090.23^{+0.87}_{-0.82}$	$\chi_{\text{DR11LOWZ}}^2$	0.48	$0.81 (\nu: 0.2)$
$c_{217}$	0.99600	$0.9960^{+0.0029}_{-0.0029}$	$r_*$	144.47	$142.6^{+2.8}_{-3.6}$	$\chi_{\text{prior}}^2$	2.1	$7.5 (\nu: 6.5)$
$H_0$	67.95	$68.7^{+2.5}_{-2.1}$	$100\theta_*$	1.04107	$1.0407^{+0.0011}_{-0.0012}$	$\chi_{\text{CMB}}^2$	11260.0	$11276.4 (\nu: 16.9)$
$\Omega_\Lambda$	0.6919	$0.690^{+0.017}_{-0.017}$	$D_A/\text{Gpc}$	13.877	$13.71^{+0.27}_{-0.34}$	$\chi_{\text{BAO}}^2$	4.31	$5.3 (\nu: 0.8)$
$\Omega_m$	0.3081	$0.310^{+0.017}_{-0.017}$	$z_{\text{drag}}$	1059.78	$1060.6^{+1.7}_{-1.5}$			

Best-fit  $\chi_{\text{eff}}^2 = 11266.35$ ;  $\bar{\chi}_{\text{eff}}^2 = 11289.10$ ;  $R - 1 = 0.01798$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.41 DR11LOWZ: 0.48 CMB - lowl.SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10495.95 plik\_dx11dr2\_HM\_v18.TT: 764.03

## 12.12 base\_nnu\_meffsterile\_plikHM\_TT\_lowTEB\_BAO\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022376	$0.02251^{+0.00049}_{-0.00046}$	$\Omega_m h^2$	0.1432	$0.1464^{+0.0075}_{-0.0065}$	$r_{\text{drag}}$	146.61	$145.0^{+3.1}_{-3.8}$
$\Omega_c h^2$	0.1202	$0.1213^{+0.0081}_{-0.0089}$	$\Omega_\nu h^2$	0.00065	$< 0.00643$	$k_D$	0.14106	$0.1422^{+0.0029}_{-0.0024}$
$100\theta_{\text{MC}}$	1.04092	$1.04068^{+0.00097}_{-0.0010}$	$\Omega_m h^3$	0.0978	$0.1009^{+0.0080}_{-0.0063}$	$100\theta_D$	0.16107	$0.1614^{+0.0011}_{-0.00097}$
$\tau$	0.0831	$0.091^{+0.040}_{-0.039}$	$\sigma_8$	0.835	$0.814^{+0.055}_{-0.058}$	$z_{\text{eq}}$	3368	$3315^{+98}_{-110}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.000	$< 0.544$	$\sigma_8 \Omega_m^{0.5}$	0.4626	$0.452^{+0.029}_{-0.031}$	$k_{\text{eq}}$	0.010339	$0.01032^{+0.00036}_{-0.00038}$
$N_{\text{eff}}$	3.132	$< 3.71$	$\sigma_8 \Omega_m^{0.25}$	0.6215	$0.607^{+0.039}_{-0.041}$	$100\theta_{\text{eq}}$	0.8195	$0.831^{+0.023}_{-0.020}$
$\ln(10^{10} A_s)$	3.102	$3.120^{+0.083}_{-0.079}$	$\sigma_8/h^{0.5}$	1.010	$0.981^{+0.060}_{-0.065}$	$100\theta_{s, \text{eq}}$	0.4526	$0.458^{+0.012}_{-0.010}$
$n_s$	0.9710	$0.977^{+0.019}_{-0.017}$	$\langle d^2 \rangle^{1/2}$	2.491	$2.484^{+0.086}_{-0.088}$	$r_{\text{drag}}/D_V(0.57)$	0.07181	$0.07168^{+0.00091}_{-0.00089}$
$y_{\text{cal}}$	1.00052	$1.0004^{+0.0049}_{-0.0049}$	$z_{\text{re}}$	10.43	$11.1^{+3.3}_{-3.6}$	$H(0.57)$	93.68	$94.6^{+2.6}_{-2.1}$
$A_{217}^{\text{CIB}}$	66.7	$65^{+10}_{-10}$	$10^9 A_s$	2.224	$2.27^{+0.19}_{-0.17}$	$D_A(0.57)$	1375.8	$1364^{+36}_{-42}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.06	—	$10^9 A_s e^{-2\tau}$	1.8838	$1.890^{+0.037}_{-0.034}$	$F_{\text{AP}}(0.57)$	0.67493	$0.6754^{+0.0041}_{-0.0041}$
$A_{143}^{\text{tSZ}}$	7.09	$4.9^{+3.9}_{-3.9}$	$D_{40}$	1230.0	$1221^{+33}_{-34}$	$f\sigma_8(0.57)$	0.4842	$0.473^{+0.031}_{-0.032}$
$A_{100}^{\text{PS}}$	253	$263^{+60}_{-60}$	$D_{220}$	5722	$5723^{+81}_{-79}$	$\sigma_8(0.57)$	0.6221	$0.606^{+0.042}_{-0.044}$
$A_{143}^{\text{PS}}$	40.0	$46^{+20}_{-20}$	$D_{810}$	2536.9	$2537^{+28}_{-27}$	$f_{2000}^{143}$	29.7	$32^{+6}_{-6}$
$A_{143 \times 217}^{\text{PS}}$	35	$39^{+20}_{-20}$	$D_{1420}$	815.3	$813.6^{+9.9}_{-9.9}$	$f_{2000}^{143 \times 217}$	32.37	$34^{+5}_{-5}$
$A_{217}^{\text{PS}}$	98.2	$97^{+20}_{-20}$	$D_{2000}$	230.54	$229.2^{+3.9}_{-4.1}$	$f_{2000}^{217}$	105.98	$107.2^{+4.4}_{-4.3}$
$A^{\text{kSZ}}$	0.0	—	$n_{s, 0.002}$	0.9710	$0.977^{+0.019}_{-0.017}$	$\chi_{\text{lowTEB}}^2$	10496.1	$10496.8 (\nu: 4.3)$
$A_{100}^{\text{dustTT}}$	7.44	$7.5^{+3.7}_{-3.6}$	$Y_{\text{P}}$	0.24655	$0.2490^{+0.0054}_{-0.0044}$	$\chi_{\text{plik}}^2$	763.9	$779.7 (\nu: 19.2)$
$A_{143}^{\text{dustTT}}$	9.03	$9.1^{+3.6}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.24788	$0.2504^{+0.0054}_{-0.0044}$	$\chi_{\text{H070p6}}^2$	0.49	$0.40 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.3^{+8.2}_{-8.1}$	$10^5 D/H$	2.620	$2.66^{+0.13}_{-0.12}$	$\chi_{6\text{DF}}^2$	0.006	$0.064 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$\text{Age/Gyr}$	13.709	$13.58^{+0.29}_{-0.36}$	$\chi_{\text{MGS}}^2$	1.47	$1.40 (\nu: 0.2)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1090.01	$1090.24^{+0.88}_{-0.84}$	$\chi_{\text{DR11CMass}}^2$	2.41	$2.98 (\nu: 0.3)$
$c_{217}$	0.99593	$0.9961^{+0.0028}_{-0.0029}$	$r_*$	143.95	$142.4^{+3.0}_{-3.6}$	$\chi_{\text{DR11LOWZ}}^2$	0.43	$0.73 (\nu: 0.2)$
$H_0$	68.28	$68.9^{+2.5}_{-2.1}$	$100\theta_*$	1.04105	$1.0407^{+0.0011}_{-0.0012}$	$\chi_{\text{prior}}^2$	2.0	$7.4 (\nu: 6.5)$
$\Omega_\Lambda$	0.6928	$0.691^{+0.016}_{-0.016}$	$D_A/\text{Gpc}$	13.828	$13.69^{+0.28}_{-0.34}$	$\chi_{\text{CMB}}^2$	11260.0	$11276.5 (\nu: 16.9)$
$\Omega_m$	0.3072	$0.309^{+0.016}_{-0.016}$	$z_{\text{drag}}$	1060.05	$1060.7^{+1.7}_{-1.5}$	$\chi_{\text{BAO}}^2$	4.32	$5.2 (\nu: 0.7)$

Best-fit  $\chi_{\text{eff}}^2 = 11266.87$ ;  $\bar{\chi}_{\text{eff}}^2 = 11289.58$ ;  $R - 1 = 0.01576$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMass: 2.41 DR11LOWZ: 0.43 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.13 plik\_dx11dr2\_HM\_v18\_TT: 763.91  
Hubble - H070p6: 0.48



### 12.13 base\_nnu\_meffsterile\_plikHM\_TT\_lowTEB\_BAO\_post\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022401	$0.02252^{+0.00048}_{-0.00045}$	$\Omega_\nu h^2$	0.00065	$< 0.00636$	$100\theta_D$	0.16107	$0.1614^{+0.0011}_{-0.00098}$
$\Omega_c h^2$	0.1201	$0.1212^{+0.0081}_{-0.0090}$	$\Omega_m h^3$	0.0980	$0.1009^{+0.0080}_{-0.0063}$	$z_{\text{eq}}$	3362	$3313^{+97}_{-110}$
$100\theta_{\text{MC}}$	1.04093	$1.04069^{+0.00097}_{-0.0010}$	$\sigma_8$	0.836	$0.815^{+0.054}_{-0.057}$	$k_{\text{eq}}$	0.010326	$0.01031^{+0.00036}_{-0.00038}$
$\tau$	0.0850	$0.091^{+0.040}_{-0.039}$	$\sigma_8 \Omega_m^{0.5}$	0.4619	$0.452^{+0.029}_{-0.031}$	$100\theta_{\text{eq}}$	0.8207	$0.831^{+0.023}_{-0.020}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.000	$< 0.537$	$\sigma_8 \Omega_m^{0.25}$	0.6214	$0.607^{+0.039}_{-0.041}$	$100\theta_{\text{s,eq}}$	0.4532	$0.459^{+0.012}_{-0.010}$
$N_{\text{eff}}$	3.140	$< 3.71$	$\sigma_8/h^{0.5}$	1.010	$0.981^{+0.059}_{-0.064}$	$r_{\text{drag}}/D_V(0.57)$	0.07190	$0.07173^{+0.00089}_{-0.00087}$
$\ln(10^{10} A_s)$	3.106	$3.121^{+0.083}_{-0.079}$	$\langle d^2 \rangle^{1/2}$	2.490	$2.483^{+0.086}_{-0.088}$	$H(0.57)$	93.78	$94.6^{+2.6}_{-2.1}$
$n_s$	0.9724	$0.978^{+0.018}_{-0.017}$	$z_{\text{re}}$	10.59	$11.1^{+3.3}_{-3.6}$	$D_A(0.57)$	1373.3	$1363^{+36}_{-42}$
$y_{\text{cal}}$	1.00056	$1.0004^{+0.0049}_{-0.0049}$	$10^9 A_s$	2.232	$2.27^{+0.19}_{-0.17}$	$F_{\text{AP}}(0.57)$	0.67448	$0.6751^{+0.0040}_{-0.0040}$
$A_{217}^{\text{CIB}}$	66.3	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8833	$1.890^{+0.037}_{-0.034}$	$f\sigma_8(0.57)$	0.4844	$0.474^{+0.031}_{-0.032}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.11	—	$D_{40}$	1227.8	$1221^{+33}_{-34}$	$\sigma_8(0.57)$	0.6233	$0.607^{+0.042}_{-0.044}$
$A_{143}^{\text{tSZ}}$	7.05	$4.9^{+3.9}_{-3.9}$	$D_{220}$	5721	$5723^{+81}_{-79}$	$f_{2000}^{143}$	29.4	$32^{+6}_{-6}$
$A_{100}^{\text{PS}}$	252	$263^{+60}_{-60}$	$D_{810}$	2537.1	$2537^{+28}_{-27}$	$f_{2000}^{143 \times 217}$	32.19	$34^{+5}_{-5}$
$A_{143}^{\text{PS}}$	40.4	$46^{+20}_{-20}$	$D_{1420}$	815.7	$813.7^{+9.9}_{-10}$	$f_{2000}^{217}$	105.87	$107.2^{+4.4}_{-4.3}$
$A_{143 \times 217}^{\text{PS}}$	35.5	$39^{+20}_{-20}$	$D_{2000}$	230.70	$229.2^{+3.9}_{-4.2}$	$\chi_{\text{lowTEB}}^2$	10496.1	$10496.8 (\nu: 4.4)$
$A_{217}^{\text{PS}}$	98.8	$97^{+20}_{-20}$	$n_{\text{s}, 0.002}$	0.9724	$0.978^{+0.018}_{-0.017}$	$\chi_{\text{plik}}^2$	764.1	$779.8 (\nu: 19.3)$
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.24668	$0.2491^{+0.0054}_{-0.0044}$	$\chi_{\text{H070p6}}^2$	0.417	$0.37 (\nu: 0.1)$
$A_{100}^{\text{dustTT}}$	7.45	$7.5^{+3.7}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.24801	$0.2504^{+0.0055}_{-0.0044}$	$\chi_{\text{JLA}}^2$	706.601	$706.71 (\nu: 0.0)$
$A_{143}^{\text{dustTT}}$	9.08	$9.1^{+3.6}_{-3.6}$	$10^5 \text{D/H}$	2.618	$2.66^{+0.13}_{-0.12}$	$\chi_{6\text{DF}}^2$	0.001	$0.056 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.3^{+8.2}_{-8.1}$	$\text{Age/Gyr}$	13.697	$13.57^{+0.29}_{-0.36}$	$\chi_{\text{MGS}}^2$	1.61	$1.46 (\nu: 0.2)$
$A_{217}^{\text{dustTT}}$	82.3	$82^{+10}_{-10}$	$z_*$	1089.98	$1090.23^{+0.89}_{-0.84}$	$\chi_{\text{DR11CMass}}^2$	2.44	$2.94 (\nu: 0.3)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	143.92	$142.4^{+3.0}_{-3.7}$	$\chi_{\text{DR11LOWZ}}^2$	0.32	$0.66 (\nu: 0.2)$
$c_{217}$	0.99594	$0.9960^{+0.0028}_{-0.0029}$	$100\theta_*$	1.04105	$1.0407^{+0.0011}_{-0.0012}$	$\chi_{\text{prior}}^2$	2.0	$7.4 (\nu: 6.5)$
$H_0$	68.45	$68.9^{+2.5}_{-2.1}$	$D_A/\text{Gpc}$	13.825	$13.69^{+0.28}_{-0.34}$	$\chi_{\text{CMB}}^2$	11260.1	$11276.6 (\nu: 16.9)$
$\Omega_\Lambda$	0.6946	$0.692^{+0.016}_{-0.016}$	$z_{\text{drag}}$	1060.09	$1060.7^{+1.7}_{-1.5}$	$\chi_{\text{BAO}}^2$	4.38	$5.1 (\nu: 0.6)$
$\Omega_m$	0.3054	$0.308^{+0.016}_{-0.016}$	$r_{\text{drag}}$	146.57	$145.0^{+3.2}_{-3.8}$			
$\Omega_m h^2$	0.1431	$0.1464^{+0.0075}_{-0.0065}$	$k_D$	0.14108	$0.1422^{+0.0029}_{-0.0025}$			

Best-fit  $\chi_{\text{eff}}^2 = 11973.54$ ;  $\bar{\chi}_{\text{eff}}^2 = 11996.22$ ;  $R - 1 = 0.01599$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMass: 2.44 DR11LOWZ: 0.33 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.07 plik\_dx11dr2\_HM\_v18\_TT: 764.07  
Hubble - H070p6: 0.42 SN - JLA December\_2013: 706.60

## 12.14 base\_nnu\_meffsterile\_plikHM\_TTTEEE\_lowTEB\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022257	$0.02241^{+0.00034}_{-0.00031}$	$A_{143}^{\text{dust}TE}$	0.154	$0.15^{+0.11}_{-0.11}$	$r_*$	144.61	$143.6^{+1.6}_{-2.2}$
$\Omega_c h^2$	0.1162	$0.1190^{+0.0069}_{-0.0082}$	$A_{143 \times 217}^{\text{dust}TE}$	0.338	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04097	$1.04083^{+0.00075}_{-0.00081}$
$100\theta_{\text{MC}}$	1.04077	$1.04071^{+0.00065}_{-0.00073}$	$A_{217}^{\text{dust}TE}$	1.666	$1.66^{+0.49}_{-0.50}$	$D_A/\text{Gpc}$	13.892	$13.80^{+0.15}_{-0.20}$
$\tau$	0.0785	$0.087^{+0.034}_{-0.034}$	$c_{100}$	0.99823	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.67	$1060.2^{+1.0}_{-0.92}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.321	$< 0.717$	$c_{217}$	0.99596	$0.9960^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.31	$146.3^{+1.6}_{-2.3}$
$N_{\text{eff}}$	3.049	$< 3.39$	$H_0$	67.34	$67.9^{+1.6}_{-1.4}$	$k_D$	0.14055	$0.1414^{+0.0017}_{-0.0014}$
$\ln(10^{10} A_s)$	3.092	$3.111^{+0.069}_{-0.068}$	$\Omega_\Lambda$	0.6857	$0.686^{+0.014}_{-0.014}$	$100\theta_D$	0.16091	$0.16104^{+0.00061}_{-0.00052}$
$n_s$	0.9647	$0.970^{+0.013}_{-0.012}$	$\Omega_m$	0.3143	$0.314^{+0.014}_{-0.014}$	$z_{\text{eq}}$	3308	$3325^{+100}_{-140}$
$y_{\text{cal}}$	1.00075	$1.0004^{+0.0049}_{-0.0048}$	$\Omega_m h^2$	0.14254	$0.1444^{+0.0046}_{-0.0038}$	$k_{\text{eq}}$	0.010160	$0.01026^{+0.00032}_{-0.00041}$
$A_{217}^{\text{CIB}}$	66.3	$64^{+10}_{-10}$	$\Omega_\nu h^2$	0.00406	$< 0.00827$	$100\theta_{\text{eq}}$	0.8322	$0.829^{+0.031}_{-0.022}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.17	—	$\Omega_m h^3$	0.09599	$0.0980^{+0.0045}_{-0.0030}$	$100\theta_{\text{s,eq}}$	0.4594	$0.458^{+0.016}_{-0.011}$
$A_{143}^{\text{tSZ}}$	7.09	$5.3^{+3.7}_{-3.8}$	$\sigma_8$	0.827	$0.812^{+0.049}_{-0.053}$	$r_{\text{drag}}/D_V(0.57)$	0.07141	$0.07144^{+0.00078}_{-0.00077}$
$A_{100}^{\text{PS}}$	256	$261^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4639	$0.454^{+0.026}_{-0.029}$	$H(0.57)$	92.89	$93.6^{+1.6}_{-1.1}$
$A_{143}^{\text{PS}}$	41.1	$44^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6195	$0.607^{+0.035}_{-0.038}$	$D_A(0.57)$	1391.2	$1381^{+22}_{-27}$
$A_{143 \times 217}^{\text{PS}}$	37.5	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.008	$0.985^{+0.055}_{-0.060}$	$F_{\text{AP}}(0.57)$	0.67675	$0.6765^{+0.0036}_{-0.0036}$
$A_{217}^{\text{PS}}$	99.0	$98^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.509	$2.504^{+0.077}_{-0.077}$	$f\sigma_8(0.57)$	0.4818	$0.473^{+0.028}_{-0.030}$
$A^{\text{kSZ}}$	0.01	$< 8.01$	$z_{\text{re}}$	10.02	$10.8^{+2.9}_{-3.1}$	$\sigma_8(0.57)$	0.6148	$0.603^{+0.038}_{-0.041}$
$A_{100}^{\text{dust}TT}$	7.46	$7.5^{+3.6}_{-3.7}$	$10^9 A_s$	2.203	$2.25^{+0.16}_{-0.15}$	$f_{2000}^{143}$	29.3	$30^{+5}_{-5}$
$A_{143}^{\text{dust}TT}$	9.04	$9.0^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8829	$1.885^{+0.027}_{-0.026}$	$f_{2000}^{143 \times 217}$	32.23	$33^{+4}_{-4}$
$A_{143 \times 217}^{\text{dust}TT}$	17.7	$17.0^{+8.1}_{-8.2}$	$D_{40}$	1240.8	$1234^{+27}_{-27}$	$f_{2000}^{217}$	105.82	$106.2^{+3.7}_{-3.7}$
$A_{217}^{\text{dust}TT}$	82.0	$82^{+10}_{-10}$	$D_{220}$	5733	$5730^{+75}_{-75}$	$\chi_{\text{lowTEB}}^2$	10496.90	$10497.7 (\nu: 3.3)$
$A_{100}^{\text{dust}EE}$	0.0814	$0.082^{+0.011}_{-0.011}$	$D_{810}$	2537.4	$2536^{+27}_{-26}$	$\chi_{\text{plik}}^2$	2431.3	$2452.3 (\nu: 25.0)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0489	$0.0492^{+0.0097}_{-0.0097}$	$D_{1420}$	815.0	$814.3^{+9.4}_{-9.2}$	$\chi_{6\text{DF}}^2$	0.069	$0.096 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.099^{+0.065}_{-0.064}$	$D_{2000}$	230.69	$229.9^{+3.2}_{-3.3}$	$\chi_{\text{MGS}}^2$	0.98	$1.08 (\nu: 0.1)$
$A_{143}^{\text{dust}EE}$	0.1002	$0.101^{+0.013}_{-0.013}$	$n_{\text{s}, 0.002}$	0.9647	$0.970^{+0.013}_{-0.012}$	$\chi_{\text{DR11CMass}}^2$	2.77	$3.13 (\nu: 0.4)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.223^{+0.092}_{-0.093}$	$Y_{\text{P}}$	0.24538	$0.2470^{+0.0032}_{-0.0021}$	$\chi_{\text{DR11LOWZ}}^2$	0.99	$1.06 (\nu: 0.2)$
$A_{217}^{\text{dust}EE}$	0.651	$0.65^{+0.25}_{-0.25}$	$Y_{\text{P}}^{\text{BBN}}$	0.24671	$0.2483^{+0.0032}_{-0.0021}$	$\chi_{\text{prior}}^2$	6.9	$19.5 (\nu: 15.1)$
$A_{100}^{\text{dust}TE}$	0.140	$0.141^{+0.074}_{-0.075}$	$10^5 \text{D}/\text{H}$	2.614	$2.625^{+0.072}_{-0.066}$	$\chi_{\text{CMB}}^2$	12928.2	$12950.0 (\nu: 23.5)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.057}_{-0.057}$	$\text{Age}/\text{Gyr}$	13.811	$13.72^{+0.14}_{-0.22}$	$\chi_{\text{BAO}}^2$	4.81	$5.4 (\nu: 0.9)$
$A_{100 \times 217}^{\text{dust}TE}$	0.303	$0.30^{+0.16}_{-0.17}$	$z_*$	1090.03	$1090.08^{+0.58}_{-0.51}$			

Best-fit  $\chi_{\text{eff}}^2 = 12939.92$ ;  $\bar{\chi}_{\text{eff}}^2 = 12974.88$ ;  $R - 1 = 0.01245$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.07 MGS: 0.98 DR11CMass: 2.77 DR11LOWZ: 0.99 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.90 plik\_dx11dr2\_HM\_v18\_TTTEEE:

## 12.15 base\_nnu\_meffsterile\_plikHM\_TTTEEE\_lowTEB\_BAO\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022353	$0.02243^{+0.00034}_{-0.00031}$	$A_{143}^{\text{dust}TE}$	0.153	$0.15^{+0.11}_{-0.11}$	$r_*$	144.47	$143.6^{+1.7}_{-2.3}$
$\Omega_c h^2$	0.1194	$0.1192^{+0.0071}_{-0.0083}$	$A_{143 \times 217}^{\text{dust}TE}$	0.339	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04105	$1.04082^{+0.00077}_{-0.00083}$
$100\theta_{\text{MC}}$	1.04089	$1.04070^{+0.00066}_{-0.00074}$	$A_{217}^{\text{dust}TE}$	1.667	$1.66^{+0.49}_{-0.50}$	$D_A/\text{Gpc}$	13.877	$13.79^{+0.16}_{-0.21}$
$\tau$	0.0836	$0.088^{+0.034}_{-0.034}$	$c_{100}$	0.99821	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.86	$1060.2^{+1.1}_{-0.94}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.000	$< 0.698$	$c_{217}$	0.99582	$0.9960^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.14	$146.2^{+1.8}_{-2.4}$
$N_{\text{eff}}$	3.073	$< 3.41$	$H_0$	67.85	$68.0^{+1.7}_{-1.4}$	$k_D$	0.14070	$0.1414^{+0.0018}_{-0.0014}$
$\ln(10^{10} A_s)$	3.102	$3.113^{+0.070}_{-0.069}$	$\Omega_\Lambda$	0.6907	$0.687^{+0.014}_{-0.014}$	$100\theta_D$	0.16090	$0.16105^{+0.00064}_{-0.00054}$
$n_s$	0.9688	$0.970^{+0.013}_{-0.012}$	$\Omega_m$	0.3093	$0.313^{+0.014}_{-0.014}$	$z_{\text{eq}}$	3375	$3325^{+100}_{-140}$
$y_{\text{cal}}$	1.00047	$1.0004^{+0.0049}_{-0.0048}$	$\Omega_m h^2$	0.14240	$0.1445^{+0.0048}_{-0.0040}$	$k_{\text{eq}}$	0.010320	$0.01027^{+0.00032}_{-0.00042}$
$A_{217}^{\text{CIB}}$	64.2	$64^{+10}_{-10}$	$\Omega_\nu h^2$	0.00065	$< 0.00807$	$100\theta_{\text{eq}}$	0.8181	$0.829^{+0.031}_{-0.021}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.38	—	$\Omega_m h^3$	0.09661	$0.0982^{+0.0048}_{-0.0032}$	$100\theta_{\text{s,eq}}$	0.4519	$0.458^{+0.016}_{-0.011}$
$A_{143}^{\text{tSZ}}$	7.04	$5.3^{+3.7}_{-3.8}$	$\sigma_8$	0.833	$0.813^{+0.049}_{-0.053}$	$r_{\text{drag}}/D_V(0.57)$	0.07169	$0.07149^{+0.00077}_{-0.00076}$
$A_{100}^{\text{PS}}$	251	$261^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4633	$0.455^{+0.026}_{-0.029}$	$H(0.57)$	93.23	$93.7^{+1.7}_{-1.2}$
$A_{143}^{\text{PS}}$	43.5	$44^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6212	$0.608^{+0.035}_{-0.038}$	$D_A(0.57)$	1383.5	$1379^{+22}_{-29}$
$A_{143 \times 217}^{\text{PS}}$	43.6	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.011	$0.986^{+0.054}_{-0.060}$	$F_{\text{AP}}(0.57)$	0.67548	$0.6763^{+0.0036}_{-0.0035}$
$A_{217}^{\text{PS}}$	102.1	$98^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.498	$2.503^{+0.077}_{-0.076}$	$f\sigma_8(0.57)$	0.4837	$0.474^{+0.028}_{-0.030}$
$A^{\text{kSZ}}$	0.01	$< 8.03$	$z_{\text{re}}$	10.45	$10.9^{+3.0}_{-3.1}$	$\sigma_8(0.57)$	0.6202	$0.605^{+0.038}_{-0.041}$
$A_{100}^{\text{dust}TT}$	7.41	$7.5^{+3.7}_{-3.7}$	$10^9 A_s$	2.223	$2.25^{+0.16}_{-0.15}$	$f_{2000}^{143}$	28.5	$30^{+5}_{-5}$
$A_{143}^{\text{dust}TT}$	9.01	$9.0^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8810	$1.885^{+0.028}_{-0.026}$	$f_{2000}^{143 \times 217}$	31.72	$33^{+4}_{-4}$
$A_{143 \times 217}^{\text{dust}TT}$	17.9	$17.0^{+8.1}_{-8.2}$	$D_{40}$	1233.7	$1233^{+27}_{-27}$	$f_{2000}^{217}$	105.21	$106.2^{+3.7}_{-3.7}$
$A_{217}^{\text{dust}TT}$	82.2	$82^{+10}_{-10}$	$D_{220}$	5727	$5730^{+75}_{-75}$	$\chi_{\text{lowTEB}}^2$	10496.6	$10497.7 (\nu: 3.4)$
$A_{100}^{\text{dust}EE}$	0.0817	$0.082^{+0.011}_{-0.011}$	$D_{810}$	2537.6	$2536^{+27}_{-26}$	$\chi_{\text{plik}}^2$	2432.5	$2452.5 (\nu: 25.3)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0493	$0.0493^{+0.0099}_{-0.0098}$	$D_{1420}$	816.2	$814.3^{+9.5}_{-9.3}$	$\chi_{\text{H070p6}}^2$	0.68	$0.66 (\nu: 0.1)$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.099^{+0.065}_{-0.064}$	$D_{2000}$	231.09	$229.9^{+3.2}_{-3.3}$	$\chi_{6\text{DF}}^2$	0.018	$0.085 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1007	$0.101^{+0.013}_{-0.013}$	$n_{\text{s}, 0.002}$	0.9688	$0.970^{+0.013}_{-0.012}$	$\chi_{\text{MGS}}^2$	1.34	$1.14 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.222	$0.223^{+0.093}_{-0.092}$	$Y_{\text{P}}$	0.24575	$0.2472^{+0.0033}_{-0.0023}$	$\chi_{\text{DR11CMass}}^2$	2.44	$3.05 (\nu: 0.3)$
$A_{217}^{\text{dust}EE}$	0.650	$0.65^{+0.25}_{-0.26}$	$Y_{\text{P}}^{\text{BBN}}$	0.24708	$0.2485^{+0.0033}_{-0.0023}$	$\chi_{\text{DR11LOWZ}}^2$	0.57	$0.98 (\nu: 0.2)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.074}_{-0.074}$	$10^5 D/H$	2.604	$2.626^{+0.075}_{-0.068}$	$\chi_{\text{prior}}^2$	6.9	$19.5 (\nu: 15.0)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.057}_{-0.057}$	$\text{Age}/\text{Gyr}$	13.770	$13.70^{+0.15}_{-0.23}$	$\chi_{\text{CMB}}^2$	12929.1	$12950.1 (\nu: 23.7)$
$A_{100 \times 217}^{\text{dust}TE}$	0.304	$0.30^{+0.16}_{-0.16}$	$z_*$	1089.92	$1090.07^{+0.60}_{-0.52}$	$\chi_{\text{BAO}}^2$	4.38	$5.3 (\nu: 0.7)$

Best-fit  $\chi^2_{\text{eff}} = 12941.08$ ;  $\bar{\chi}^2_{\text{eff}} = 12975.57$ ;  $R - 1 = 0.01234$   
 $\chi^2_{\text{eff}}$ : BAO - 6DF: 0.02 MGS: 1.34 DR11CMASS: 2.44 DR11LOWZ: 0.57 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.60 plik\_dx11dr2\_HM\_v18\_TTTEEE:  
2432.48 Hubble - H070p6: 0.68

12.16 base\_nnu\_meffsterile\_plikHM\_TTTEEE\_lowTEB\_BAO\_post\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022329	$0.02243^{+0.00034}_{-0.00031}$	$A_{143 \times 217}^{\text{dust}TE}$	0.339	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.895	$13.79^{+0.16}_{-0.22}$
$\Omega_c h^2$	0.1166	$0.1191^{+0.0071}_{-0.0084}$	$A_{217}^{\text{dust}TE}$	1.662	$1.66^{+0.49}_{-0.50}$	$z_{\text{drag}}$	1059.78	$1060.3^{+1.1}_{-0.94}$
$100\theta_{\text{MC}}$	1.04085	$1.04071^{+0.00067}_{-0.00075}$	$c_{100}$	0.99820	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.34	$146.2^{+1.8}_{-2.4}$
$\tau$	0.0776	$0.089^{+0.034}_{-0.034}$	$c_{217}$	0.99604	$0.9960^{+0.0028}_{-0.0028}$	$k_D$	0.14058	$0.1414^{+0.0018}_{-0.0015}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.246	$< 0.698$	$H_0$	67.56	$68.1^{+1.7}_{-1.4}$	$100\theta_D$	0.16083	$0.16105^{+0.00065}_{-0.00054}$
$N_{\text{eff}}$	3.048	$< 3.41$	$\Omega_\Lambda$	0.6884	$0.688^{+0.014}_{-0.014}$	$z_{\text{eq}}$	3320	$3324^{+100}_{-140}$
$\ln(10^{10} A_s)$	3.088	$3.114^{+0.069}_{-0.069}$	$\Omega_m$	0.3116	$0.312^{+0.014}_{-0.013}$	$k_{\text{eq}}$	0.010181	$0.01026^{+0.00033}_{-0.00042}$
$n_s$	0.9658	$0.971^{+0.013}_{-0.012}$	$\Omega_m h^2$	0.14223	$0.1444^{+0.0049}_{-0.0040}$	$100\theta_{\text{eq}}$	0.8298	$0.829^{+0.031}_{-0.021}$
$y_{\text{cal}}$	1.00009	$1.0004^{+0.0049}_{-0.0048}$	$\Omega_\nu h^2$	0.00326	$< 0.00807$	$100\theta_{s, \text{eq}}$	0.4581	$0.458^{+0.016}_{-0.011}$
$A_{217}^{\text{CIB}}$	66.5	$64^{+10}_{-10}$	$\Omega_m h^3$	0.09609	$0.0983^{+0.0049}_{-0.0033}$	$r_{\text{drag}}/D_V(0.57)$	0.07156	$0.07153^{+0.00076}_{-0.00074}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.13	—	$\sigma_8$	0.825	$0.814^{+0.049}_{-0.053}$	$H(0.57)$	93.00	$93.7^{+1.7}_{-1.2}$
$A_{143}^{\text{tSZ}}$	7.17	$5.3^{+3.7}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	0.4606	$0.455^{+0.026}_{-0.029}$	$D_A(0.57)$	1388.1	$1378^{+22}_{-29}$
$A_{100}^{\text{PS}}$	255	$261^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6165	$0.608^{+0.035}_{-0.038}$	$F_{\text{AP}}(0.57)$	0.67605	$0.6761^{+0.0035}_{-0.0035}$
$A_{143}^{\text{PS}}$	39.6	$44^{+10}_{-20}$	$\sigma_8/h^{0.5}$	1.004	$0.987^{+0.054}_{-0.060}$	$f\sigma_8(0.57)$	0.4798	$0.474^{+0.028}_{-0.030}$
$A_{143 \times 217}^{\text{PS}}$	35.6	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.496	$2.503^{+0.077}_{-0.077}$	$\sigma_8(0.57)$	0.6138	$0.606^{+0.038}_{-0.041}$
$A_{217}^{\text{PS}}$	97.9	$98^{+20}_{-20}$	$z_{\text{re}}$	9.92	$10.9^{+3.0}_{-3.1}$	$f_{2000}^{143}$	29.0	$30^{+5}_{-5}$
$A^{\text{kSZ}}$	0.00	$< 8.02$	$10^9 A_s$	2.194	$2.25^{+0.16}_{-0.15}$	$f_{2000}^{143 \times 217}$	31.91	$33^{+4}_{-4}$
$A_{100}^{\text{dust}TT}$	7.41	$7.5^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8788	$1.885^{+0.028}_{-0.026}$	$f_{2000}^{217}$	105.51	$106.2^{+3.7}_{-3.7}$
$A_{143}^{\text{dust}TT}$	8.99	$9.0^{+3.6}_{-3.6}$	$D_{40}$	1236.7	$1233^{+27}_{-27}$	$\chi_{\text{lowTEB}}^2$	10496.5	10497.6 ( $\nu$ : 3.4)
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.0^{+8.1}_{-8.2}$	$D_{220}$	5731	$5731^{+75}_{-75}$	$\chi_{\text{plik}}^2$	2431.9	2452.5 ( $\nu$ : 25.4)
$A_{217}^{\text{dust}TT}$	81.9	$82^{+10}_{-10}$	$D_{810}$	2534.5	$2536^{+27}_{-26}$	$\chi_{\text{H070p6}}^2$	0.83	0.64 ( $\nu$ : 0.1)
$A_{100}^{\text{dust}EE}$	0.0814	$0.082^{+0.011}_{-0.011}$	$D_{1420}$	814.7	$814.4^{+9.5}_{-9.3}$	$\chi_{\text{JLA}}^2$	706.751	706.80 ( $\nu$ : 0.0)
$A_{100 \times 143}^{\text{dust}EE}$	0.0490	$0.0493^{+0.0099}_{-0.0098}$	$D_{2000}$	230.65	$230.0^{+3.2}_{-3.3}$	$\chi_{6\text{DF}}^2$	0.037	0.075 ( $\nu$ : 0.0)
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.099^{+0.065}_{-0.064}$	$n_{s, 0.002}$	0.9658	$0.971^{+0.013}_{-0.012}$	$\chi_{\text{MGS}}^2$	1.16	1.19 ( $\nu$ : 0.1)
$A_{143}^{\text{dust}EE}$	0.1005	$0.101^{+0.013}_{-0.013}$	$Y_P$	0.24540	$0.2472^{+0.0033}_{-0.0023}$	$\chi_{\text{DR11CMass}}^2$	2.55	2.97 ( $\nu$ : 0.3)
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.223^{+0.093}_{-0.092}$	$Y_P^{\text{BBN}}$	0.24673	$0.2485^{+0.0034}_{-0.0023}$	$\chi_{\text{DR11LOWZ}}^2$	0.75	0.91 ( $\nu$ : 0.2)
$A_{217}^{\text{dust}EE}$	0.654	$0.65^{+0.25}_{-0.26}$	$10^5 D/H$	2.600	$2.625^{+0.076}_{-0.068}$	$\chi_{\text{prior}}^2$	6.9	19.6 ( $\nu$ : 15.0)
$A_{100}^{\text{dust}TE}$	0.139	$0.141^{+0.074}_{-0.074}$	Age/Gyr	13.800	$13.70^{+0.16}_{-0.23}$	$\chi_{\text{CMB}}^2$	12928.5	12950.1 ( $\nu$ : 23.7)
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.057}_{-0.057}$	$z_*$	1089.91	$1090.05^{+0.60}_{-0.52}$	$\chi_{\text{BAO}}^2$	4.49	5.1 ( $\nu$ : 0.6)
$A_{100 \times 217}^{\text{dust}TE}$	0.303	$0.30^{+0.16}_{-0.16}$	$r_*$	144.66	$143.6^{+1.7}_{-2.3}$			
$A_{143}^{\text{dust}TE}$	0.155	$0.15^{+0.11}_{-0.11}$	$100\theta_*$	1.04104	$1.04082^{+0.00078}_{-0.00084}$			

Best-fit  $\chi_{\text{eff}}^2 = 13647.45$ ;  $\bar{\chi}_{\text{eff}}^2 = 13682.29$ ;  $R - 1 = 0.01225$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.04 MGS: 1.16 DR11CMASS: 2.55 DR11LOWZ: 0.75 CMB - lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.55 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.91 Hubble - H070p6: 0.83 SN - JLA December\_2013: 706.75

## 12.17 base\_nnu\_meffsterile\_CamSpecHM\_TT\_lowTEB\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022309	$0.02247^{+0.00046}_{-0.00043} \quad (-0.0\sigma)$	$\Omega_\Lambda$	0.6927	$0.691^{+0.016}_{-0.017} \quad (+0.1\sigma)$	$k_D$	0.14095	$0.1419^{+0.0027}_{-0.0022} \quad (-0.1\sigma)$
$\Omega_c h^2$	0.1202	$0.1203^{+0.0091}_{-0.0097} \quad (-0.1\sigma)$	$\Omega_m$	0.3073	$0.309^{+0.017}_{-0.016} \quad (-0.1\sigma)$	$100\theta_D$	0.16115	$0.1613^{+0.0010}_{-0.00092} \quad (-0.1\sigma)$
$100\theta_{\text{MC}}$	1.04089	$1.04078^{+0.00099}_{-0.0011} \quad (+0.1\sigma)$	$\Omega_m h^2$	0.1432	$0.1457^{+0.0071}_{-0.0058} \quad (-0.1\sigma)$	$z_{\text{eq}}$	3365	$3309^{+110}_{-140} \quad (-0.1\sigma)$
$\tau$	0.0790	$0.089^{+0.040}_{-0.039} \quad (-0.0\sigma)$	$\Omega_\nu h^2$	0.00065	$< 0.00800 \quad (+0.1\sigma)$	$100\theta_{\text{eq}}$	0.8198	$0.832^{+0.030}_{-0.024} \quad (+0.1\sigma)$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.000	$< 0.692 \quad (+0.1\sigma)$	$\Omega_m h^3$	0.0977	$< 0.107 \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	0.07181	$0.07168^{+0.00093}_{-0.00090} \quad (+0.1\sigma)$
$N_{\text{eff}}$	3.135	$< 3.65 \quad (-0.1\sigma)$	$\sigma_8$	0.831	$0.810^{+0.057}_{-0.061} \quad (-0.1\sigma)$	$H(0.57)$	93.64	$94.3^{+2.5}_{-1.9} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	3.091	$3.113^{+0.082}_{-0.079} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4605	$0.450^{+0.030}_{-0.033} \quad (-0.1\sigma)$	$D_A(0.57)$	1376.3	$1368^{+33}_{-42} \quad (+0.0\sigma)$
$n_s$	0.9715	$0.977^{+0.018}_{-0.017} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.6185	$0.604^{+0.041}_{-0.044} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	0.67496	$0.6754^{+0.0042}_{-0.0042} \quad (-0.1\sigma)$
$y_{\text{cal}}$	1.0006	$1.0003^{+0.0050}_{-0.0050} \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	1.006	$0.977^{+0.063}_{-0.068} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	0.4819	$0.471^{+0.032}_{-0.034} \quad (-0.1\sigma)$
$A_{100}^{\text{PS}}$	251.6	$250^{+40}_{-40} \quad (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	2.477	$2.477^{+0.087}_{-0.089} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	0.6191	$0.603^{+0.044}_{-0.047} \quad (-0.1\sigma)$
$A_{143}^{\text{PS}}$	35.9	$41^{+20}_{-20} \quad (-0.6\sigma)$	$z_{\text{re}}$	10.08	$10.9^{+3.3}_{-3.7} \quad (-0.0\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	0.24746	$< 0.254 \quad (-0.3\sigma)$
$A_{217}^{\text{PS}}$	94.4	$97^{+30}_{-30} \quad (+0.0\sigma)$	$10^9 A_s$	2.201	$2.25^{+0.19}_{-0.17} \quad (-0.1\sigma)$	$f_{2000}^{143}$	30.0	$30^{+6}_{-6} \quad (-0.4\sigma)$
$A_{217}^{\text{CIB}}$	48.0	$47^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	1.8794	$1.883^{+0.035}_{-0.032} \quad (-0.3\sigma)$	$f_{2000}^{217}$	107.31	$107.4^{+4.4}_{-4.3} \quad (+0.1\sigma)$
$A_{143}^{\text{tSZ}}$	2.80	$< 6.44 \quad (-0.9\sigma)$	$D_{40}$	1223.6	$1215^{+31}_{-33} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	32.39	$33^{+5}_{-5} \quad (-0.3\sigma)$
$r_{143 \times 217}^{\text{PS}}$	0.402	$0.51^{+0.22}_{-0.19}$	$D_{220}$	5701	$5701^{+78}_{-80} \quad (-0.5\sigma)$	$\chi_{\text{lowTEB}}^2$	10495.3	$10496.3 \quad (\nu: 3.7) \quad (-0.2\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$D_{810}$	2531.9	$2532^{+28}_{-28} \quad (-0.3\sigma)$	$\chi_{\text{CamSpec}}^2$	8045.5	$8061.7 \quad (\nu: 19.8)$
$A^{\text{kSZ}}$	6.0	—	$D_{1420}$	813.8	$813^{+10}_{-10} \quad (-0.0\sigma)$	$\chi_{6\text{DF}}^2$	0.006	$0.066 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{100}^{\text{dust}}$	0.998	$0.99^{+0.38}_{-0.38}$	$n_{s,0.002}$	0.9715	$0.977^{+0.018}_{-0.017} \quad (+0.1\sigma)$	$\chi_{\text{MGS}}^2$	1.47	$1.39 \quad (\nu: 0.2) \quad (+0.1\sigma)$
$A_{143}^{\text{dust}}$	1.039	$1.03^{+0.36}_{-0.36}$	$Y_{\text{P}}$	0.24613	$< 0.253 \quad (-0.3\sigma)$	$\chi_{\text{DR11CMASS}}^2$	2.41	$2.99 \quad (\nu: 0.3) \quad (-0.1\sigma)$
$A_{217}^{\text{dust}}$	1.215	$1.21^{+0.23}_{-0.23}$	Age/Gyr	13.714	$13.61^{+0.26}_{-0.34} \quad (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	0.43	$0.75 \quad (\nu: 0.2) \quad (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	0.951	$0.99^{+0.35}_{-0.35}$	$z_*$	1090.08	$1090.17^{+0.85}_{-0.83} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	3.7	$8.5 \quad (\nu: 6.3) \quad (+0.3\sigma)$
$c_{100}$	0.99664	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$r_*$	143.99	$142.8^{+2.7}_{-3.4} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	18540.7	$18557.9 \quad (\nu: 18.1) \quad (+1251.2\sigma)$
$c_{217}$	0.99753	$0.9974^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$100\theta_*$	1.04104	$1.0408^{+0.0011}_{-0.0012} \quad (+0.2\sigma)$	$\chi_{\text{BAO}}^2$	4.31	$5.2 \quad (\nu: 0.8) \quad (-0.0\sigma)$
$\beta_1^1$	-0.27	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	1059.86	$1060.5^{+1.5}_{-1.4} \quad (-0.1\sigma)$			
$H_0$	68.25	$68.7^{+2.4}_{-2.0} \quad (-0.0\sigma)$	$r_{\text{drag}}$	146.67	$145.4^{+2.8}_{-3.6} \quad (+0.1\sigma)$			

Best-fit  $\chi^2_{\text{eff}} = 18548.77$ ;  $\Delta\chi^2_{\text{eff}} = 7282.42$ ;  $\bar{\chi}^2_{\text{eff}} = 18571.56$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 7282.46$ ;  $R - 1 = 0.03413$   
 $\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 ( $\Delta$  -0.00) MGS: 1.47 ( $\Delta$  0.07) DR11CMASS: 2.41 ( $\Delta$  -0.00) DR11LOWZ: 0.43 ( $\Delta$  -0.06) CMB - lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.27 ( $\Delta$  -0.68) CamSpec like.v9.10CMH\_unified: 8045.47

# 12.18 base\_nnu\_meffsterile\_CamSpecHM\_TT\_lowTEB\_BAO\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02249^{+0.00045}_{-0.00043} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.692^{+0.016}_{-0.016} \quad (+0.1\sigma)$	$k_D$	$0.1421^{+0.0027}_{-0.0023} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1206^{+0.0092}_{-0.0096} \quad (-0.1\sigma)$	$\Omega_m$	$0.308^{+0.016}_{-0.016} \quad (-0.1\sigma)$	$100\theta_D$	$0.1614^{+0.0011}_{-0.00095} \quad (-0.1\sigma)$
$100\theta_{MC}$	$1.0408^{+0.0010}_{-0.0011} \quad (+0.2\sigma)$	$\Omega_m h^2$	$0.1460^{+0.0073}_{-0.0061} \quad (-0.1\sigma)$	$z_{eq}$	$3308^{+110}_{-130} \quad (-0.1\sigma)$
$\tau$	$0.090^{+0.040}_{-0.039} \quad (-0.0\sigma)$	$\Omega_\nu h^2$	$< 0.00766 \quad (+0.1\sigma)$	$100\theta_{eq}$	$0.832^{+0.028}_{-0.023} \quad (+0.1\sigma)$
$m_{\nu, sterile}^{eff}$	$< 0.660 \quad (+0.1\sigma)$	$\Omega_m h^3$	$< 0.108 \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.07173^{+0.00091}_{-0.00088} \quad (+0.1\sigma)$
$N_{eff}$	$< 3.67 \quad (-0.1\sigma)$	$\sigma_8$	$0.811^{+0.056}_{-0.060} \quad (-0.1\sigma)$	$H(0.57)$	$94.5^{+2.5}_{-2.0} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.116^{+0.082}_{-0.080} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.030}_{-0.032} \quad (-0.1\sigma)$	$D_A(0.57)$	$1365^{+34}_{-41} \quad (+0.1\sigma)$
$n_s$	$0.979^{+0.018}_{-0.017} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.040}_{-0.043} \quad (-0.1\sigma)$	$F_{AP}(0.57)$	$0.6752^{+0.0041}_{-0.0041} \quad (-0.1\sigma)$
$y_{cal}$	$1.0003^{+0.0050}_{-0.0051} \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.978^{+0.062}_{-0.067} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.472^{+0.031}_{-0.034} \quad (-0.1\sigma)$
$A_{100}^{PS}$	$250^{+40}_{-40} \quad (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.476^{+0.087}_{-0.088} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.605^{+0.043}_{-0.046} \quad (-0.1\sigma)$
$A_{143}^{PS}$	$41^{+20}_{-20} \quad (-0.6\sigma)$	$z_{re}$	$11.0^{+3.3}_{-3.6} \quad (-0.0\sigma)$	$Y_P^{BBN}$	$< 0.254 \quad (-0.3\sigma)$
$A_{217}^{PS}$	$97^{+30}_{-30} \quad (+0.0\sigma)$	$10^9 A_s$	$2.26^{+0.17}_{-0.17} \quad (-0.1\sigma)$	$f_{2000}^{143}$	$30^{+6}_{-6} \quad (-0.4\sigma)$
$A_{217}^{CIB}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.884^{+0.035}_{-0.033} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$107.5^{+4.5}_{-4.3} \quad (+0.1\sigma)$
$A_{143}^{tSZ}$	$< 6.44 \quad (-0.9\sigma)$	$D_{40}$	$1214^{+31}_{-33} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$33^{+5}_{-5} \quad (-0.3\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.22}_{-0.19}$	$D_{220}$	$5701^{+77}_{-79} \quad (-0.5\sigma)$	$\chi_{lowTEB}^2$	$10496.2 \quad (\nu: 3.8) \quad (-0.2\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{810}$	$2533^{+28}_{-28} \quad (-0.3\sigma)$	$\chi_{CamSpec}^2$	$8061.8 \quad (\nu: 19.8)$
$A^{kSZ}$	—	$D_{1420}$	$814^{+10}_{-10} \quad (-0.0\sigma)$	$\chi_{H070p6}^2$	$0.40 \quad (\nu: 0.1) \quad (+0.0\sigma)$
$A_{100}^{dust}$	$0.995^{+0.38}_{-0.38}$	$n_{s,0.002}$	$0.979^{+0.018}_{-0.017} \quad (+0.1\sigma)$	$\chi_{6DF}^2$	$0.058 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{143}^{dust}$	$1.03^{+0.36}_{-0.36}$	$Y_P$	$< 0.253 \quad (-0.3\sigma)$	$\chi_{MGS}^2$	$1.45 \quad (\nu: 0.2) \quad (+0.1\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$Age/Gyr$	$13.59^{+0.27}_{-0.34} \quad (+0.1\sigma)$	$\chi_{DR11CMass}^2$	$2.95 \quad (\nu: 0.3) \quad (-0.0\sigma)$
$A_{143 \times 217}^{dust}$	$0.99^{+0.35}_{-0.35}$	$z_*$	$1090.18^{+0.88}_{-0.85} \quad (-0.1\sigma)$	$\chi_{DR11LOWZ}^2$	$0.67 \quad (\nu: 0.2) \quad (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0020} \quad (-1.4\sigma)$	$r_*$	$142.6^{+2.8}_{-3.5} \quad (+0.1\sigma)$	$\chi_{prior}^2$	$8.5 \quad (\nu: 6.3) \quad (+0.3\sigma)$
$c_{217}$	$0.9974^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$100\theta_*$	$1.0408^{+0.0011}_{-0.0012} \quad (+0.2\sigma)$	$\chi_{CMB}^2$	$18558.0 \quad (\nu: 18.0) \quad (+1251.3\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{drag}$	$1060.6^{+1.5}_{-1.4} \quad (-0.1\sigma)$	$\chi_{BAO}^2$	$5.1 \quad (\nu: 0.6) \quad (-0.0\sigma)$
$H_0$	$68.8^{+2.4}_{-2.0} \quad (-0.0\sigma)$	$r_{drag}$	$145.2^{+2.9}_{-3.6} \quad (+0.1\sigma)$		

$$\bar{\chi}_{eff}^2 = 18572.00; \Delta\chi_{eff}^2 = 7282.42; R - 1 = 0.03394$$

## 12.19 base\_nnu\_meffsterile\_CamSpecHM\_TT\_lowTEB\_BAO\_post\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02250^{+0.00044}_{-0.00043} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.692^{+0.016}_{-0.016} \quad (+0.1\sigma)$	$k_D$	$0.1421^{+0.0028}_{-0.0023} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1206^{+0.0092}_{-0.0097} \quad (-0.2\sigma)$	$\Omega_m$	$0.308^{+0.016}_{-0.016} \quad (-0.1\sigma)$	$100\theta_D$	$0.1614^{+0.0011}_{-0.00096} \quad (-0.1\sigma)$
$100\theta_{MC}$	$1.0408^{+0.0010}_{-0.0011} \quad (+0.2\sigma)$	$\Omega_m h^2$	$0.1459^{+0.0073}_{-0.0061} \quad (-0.1\sigma)$	$z_{eq}$	$3307^{+110}_{-130} \quad (-0.1\sigma)$
$\tau$	$0.090^{+0.039}_{-0.039} \quad (-0.0\sigma)$	$\Omega_\nu h^2$	$< 0.00764 \quad (+0.1\sigma)$	$100\theta_{eq}$	$0.833^{+0.028}_{-0.023} \quad (+0.1\sigma)$
$m_{\nu, sterile}^{eff}$	$< 0.658 \quad (+0.1\sigma)$	$\Omega_m h^3$	$< 0.108 \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.07177^{+0.00089}_{-0.00085} \quad (+0.1\sigma)$
$N_{eff}$	$< 3.68 \quad (-0.1\sigma)$	$\sigma_8$	$0.812^{+0.056}_{-0.060} \quad (-0.1\sigma)$	$H(0.57)$	$94.5^{+2.5}_{-2.0} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.117^{+0.082}_{-0.080} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.030}_{-0.032} \quad (-0.1\sigma)$	$D_A(0.57)$	$1364^{+34}_{-40} \quad (+0.1\sigma)$
$n_s$	$0.979^{+0.018}_{-0.017} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.040}_{-0.043} \quad (-0.1\sigma)$	$F_{AP}(0.57)$	$0.6750^{+0.0039}_{-0.0040} \quad (-0.1\sigma)$
$y_{cal}$	$1.0003^{+0.0050}_{-0.0051} \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.978^{+0.062}_{-0.066} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.472^{+0.031}_{-0.034} \quad (-0.1\sigma)$
$A_{100}^{PS}$	$250^{+40}_{-40} \quad (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.475^{+0.086}_{-0.088} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.605^{+0.043}_{-0.046} \quad (-0.1\sigma)$
$A_{143}^{PS}$	$41^{+20}_{-20} \quad (-0.6\sigma)$	$z_{re}$	$11.0^{+3.3}_{-3.7} \quad (-0.0\sigma)$	$Y_P^{BBN}$	$< 0.255 \quad (-0.3\sigma)$
$A_{217}^{PS}$	$97^{+30}_{-30} \quad (+0.0\sigma)$	$10^9 A_s$	$2.26^{+0.19}_{-0.17} \quad (-0.1\sigma)$	$f_{2000}^{143}$	$30^{+6}_{-6} \quad (-0.4\sigma)$
$A_{217}^{CIB}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.884^{+0.035}_{-0.033} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$107.4^{+4.5}_{-4.4} \quad (+0.1\sigma)$
$A_{143}^{tSZ}$	$< 6.44 \quad (-0.9\sigma)$	$D_{40}$	$1214^{+31}_{-33} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$33^{+5}_{-5} \quad (-0.3\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.22}_{-0.19}$	$D_{220}$	$5702^{+77}_{-80} \quad (-0.5\sigma)$	$\chi_{lowTEB}^2$	$10496.2 \quad (\nu: 3.9) \quad (-0.2\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{810}$	$2533^{+28}_{-28} \quad (-0.3\sigma)$	$\chi_{CamSpec}^2$	$8061.8 \quad (\nu: 19.8)$
$A^{kSZ}$	—	$D_{1420}$	$814^{+10}_{-10} \quad (-0.0\sigma)$	$\chi_{H070p6}^2$	$0.38 \quad (\nu: 0.0) \quad (+0.0\sigma)$
$A_{100}^{dust}$	$0.995^{+0.38}_{-0.38}$	$n_{s,0.002}$	$0.979^{+0.018}_{-0.017} \quad (+0.1\sigma)$	$\chi_{JLA}^2$	$706.70 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{143}^{dust}$	$1.03^{+0.36}_{-0.36}$	$Y_P$	$< 0.253 \quad (-0.3\sigma)$	$\chi_{6DF}^2$	$0.052 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$Age/Gyr$	$13.59^{+0.27}_{-0.34} \quad (+0.1\sigma)$	$\chi_{MGS}^2$	$1.51 \quad (\nu: 0.2) \quad (+0.1\sigma)$
$A_{143 \times 217}^{dust}$	$0.99^{+0.35}_{-0.35}$	$z_*$	$1090.17^{+0.88}_{-0.85} \quad (-0.1\sigma)$	$\chi_{DR11CMass}^2$	$2.91 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0020} \quad (-1.4\sigma)$	$r_*$	$142.6^{+2.8}_{-3.5} \quad (+0.1\sigma)$	$\chi_{DR11LOWZ}^2$	$0.61 \quad (\nu: 0.2) \quad (-0.1\sigma)$
$c_{217}$	$0.9974^{+0.0036}_{-0.0035} \quad (+0.9\sigma)$	$100\theta_*$	$1.0408^{+0.0011}_{-0.0012} \quad (+0.2\sigma)$	$\chi_{prior}^2$	$8.5 \quad (\nu: 6.2) \quad (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{drag}$	$1060.6^{+1.5}_{-1.4} \quad (-0.1\sigma)$	$\chi_{CMB}^2$	$18558.0 \quad (\nu: 18.0) \quad (+1251.1\sigma)$
$H_0$	$68.9^{+2.3}_{-2.0} \quad (-0.0\sigma)$	$r_{drag}$	$145.2^{+3.0}_{-3.6} \quad (+0.1\sigma)$	$\chi_{BAO}^2$	$5.1 \quad (\nu: 0.5) \quad (-0.0\sigma)$

$$\bar{\chi}_{eff}^2 = 19278.64; \Delta\chi_{eff}^2 = 7282.43; R - 1 = 0.03452$$



## 12.20 base\_nnu\_meffsterile\_CamSpecHM\_TTTEEE\_lowTEB\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022387	$0.02248^{+0.00033}_{-0.00031}$ (+0.5 $\sigma$ )	$\beta_1^1$	-0.07	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	1059.89	$1060.28^{+0.93}_{-0.87}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	0.1185	$0.1180^{+0.0056}_{-0.0071}$ (-0.3 $\sigma$ )	$H_0$	67.75	$67.9^{+1.3}_{-1.2}$ (+0.1 $\sigma$ )	$r_{\text{drag}}$	147.37	$146.5^{+1.4}_{-1.9}$ (+0.2 $\sigma$ )
$100\theta_{\text{MC}}$	1.04085	$1.04078^{+0.00063}_{-0.00065}$ (+0.2 $\sigma$ )	$\Omega_\Lambda$	0.6908	$0.688^{+0.014}_{-0.014}$ (+0.3 $\sigma$ )	$k_{\text{D}}$	0.14060	$0.1413^{+0.0015}_{-0.0012}$ (-0.1 $\sigma$ )
$\tau$	0.0851	$0.083^{+0.035}_{-0.033}$ (-0.2 $\sigma$ )	$\Omega_{\text{m}}$	0.3092	$0.312^{+0.014}_{-0.014}$ (-0.3 $\sigma$ )	$100\theta_{\text{D}}$	0.16074	$0.16085^{+0.00056}_{-0.00051}$ (-0.7 $\sigma$ )
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.034	< 0.690 (+0.1 $\sigma$ )	$\Omega_{\text{m}} h^2$	0.14189	$0.1437^{+0.0041}_{-0.0035}$ (-0.3 $\sigma$ )	$z_{\text{eq}}$	3366	$3314^{+98}_{-130}$ (-0.2 $\sigma$ )
$N_{\text{eff}}$	3.047	< 3.32 (-0.2 $\sigma$ )	$\Omega_\nu h^2$	0.00101	< 0.00798 (+0.1 $\sigma$ )	$100\theta_{\text{eq}}$	0.8200	$0.832^{+0.028}_{-0.021}$ (+0.2 $\sigma$ )
$\ln(10^{10} A_{\text{s}})$	3.099	$3.098^{+0.070}_{-0.064}$ (-0.4 $\sigma$ )	$\Omega_{\text{m}} h^3$	0.09612	$0.0976^{+0.0035}_{-0.0023}$ (-0.2 $\sigma$ )	$r_{\text{drag}}/D_{\text{V}}(0.57)$	0.07169	$0.07154^{+0.00077}_{-0.00075}$ (+0.3 $\sigma$ )
$n_{\text{s}}$	0.9689	$0.971^{+0.011}_{-0.011}$ (+0.2 $\sigma$ )	$\sigma_8$	0.8302	$0.802^{+0.046}_{-0.050}$ (-0.4 $\sigma$ )	$H(0.57)$	93.08	$93.5^{+1.3}_{-0.89}$ (-0.1 $\sigma$ )
$y_{\text{cal}}$	1.00002	$1.0004^{+0.0049}_{-0.0049}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_{\text{m}}^{0.5}$	0.4616	$0.447^{+0.025}_{-0.026}$ (-0.5 $\sigma$ )	$D_{\text{A}}(0.57)$	1385.6	$1381^{+18}_{-22}$ (-0.0 $\sigma$ )
$A_{100}^{\text{PS}}$	242.4	$245^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8 \Omega_{\text{m}}^{0.25}$	0.6190	$0.599^{+0.033}_{-0.036}$ (-0.4 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.67543	$0.6760^{+0.0035}_{-0.0035}$ (-0.3 $\sigma$ )
$A_{143}^{\text{PS}}$	34.9	$39^{+10}_{-10}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	1.009	$0.973^{+0.053}_{-0.058}$ (-0.4 $\sigma$ )	$f\sigma_8(0.57)$	0.4821	$0.466^{+0.026}_{-0.028}$ (-0.4 $\sigma$ )
$A_{217}^{\text{PS}}$	98.9	$99^{+30}_{-30}$ (+0.1 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.495	$2.482^{+0.076}_{-0.075}$ (-0.6 $\sigma$ )	$\sigma_8(0.57)$	0.6182	$0.596^{+0.036}_{-0.038}$ (-0.4 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.2	$46^{+10}_{-10}$ (-2.8 $\sigma$ )	$z_{\text{re}}$	10.55	$10.4^{+2.9}_{-3.1}$ (-0.3 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.24632	< 0.250 (-0.5 $\sigma$ )
$A_{143}^{\text{tSZ}}$	4.45	< 6.71 (-1.1 $\sigma$ )	$10^9 A_{\text{s}}$	2.218	$2.22^{+0.16}_{-0.14}$ (-0.4 $\sigma$ )	$f_{2000}^{143}$	28.1	$29^{+5}_{-5}$ (-0.4 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.454	$0.52^{+0.23}_{-0.21}$	$10^9 A_{\text{s}} e^{-2\tau}$	1.8714	$1.877^{+0.025}_{-0.023}$ (-0.6 $\sigma$ )	$f_{2000}^{217}$	105.70	$106.4^{+3.8}_{-3.9}$ (+0.1 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1228.7	$1225^{+26}_{-26}$ (-0.7 $\sigma$ )	$f_{2000}^{143 \times 217}$	30.92	$32^{+4}_{-4}$ (-0.5 $\sigma$ )
$A^{\text{kSZ}}$	2.9	—	$D_{220}$	5706	$5714^{+75}_{-75}$ (-0.4 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10496.47	$10496.5$ ( $\nu$ : 2.5) (-0.5 $\sigma$ )
$A_{100}^{\text{dust}}$	0.984	$0.99^{+0.38}_{-0.37}$	$D_{810}$	2528.4	$2531^{+26}_{-26}$ (-0.3 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	12935.5	$12953.9$ ( $\nu$ : 19.5)
$A_{143}^{\text{dust}}$	1.035	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	814.3	$814.5^{+9.1}_{-9.0}$ (+0.1 $\sigma$ )	$\chi_{6\text{DF}}^2$	0.017	$0.074$ ( $\nu$ : 0.0) (-0.2 $\sigma$ )
$A_{217}^{\text{dust}}$	1.216	$1.21^{+0.22}_{-0.23}$	$n_{\text{s}, 0.002}$	0.9689	$0.971^{+0.011}_{-0.011}$ (+0.2 $\sigma$ )	$\chi_{\text{MGS}}^2$	1.34	$1.20$ ( $\nu$ : 0.1) (+0.3 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.994	$0.98^{+0.35}_{-0.35}$	$Y_{\text{P}}$	0.24499	< 0.249 (-0.5 $\sigma$ )	$\chi_{\text{DR11CMass}}^2$	2.44	$2.97$ ( $\nu$ : 0.3) (-0.2 $\sigma$ )
$c_{100}$	0.99674	$0.9968^{+0.0019}_{-0.0019}$ (-1.8 $\sigma$ )	Age/Gyr	13.793	$13.73^{+0.12}_{-0.17}$ (+0.1 $\sigma$ )	$\chi_{\text{DR11LOWZ}}^2$	0.57	$0.90$ ( $\nu$ : 0.2) (-0.2 $\sigma$ )
$c_{217}$	0.99706	$0.9971^{+0.0034}_{-0.0034}$ (+0.8 $\sigma$ )	$z_*$	1089.78	$1089.88^{+0.56}_{-0.54}$ (-0.7 $\sigma$ )	$\chi_{\text{prior}}^2$	3.4	$9.0$ ( $\nu$ : 6.2) (-1.9 $\sigma$ )
$c_{\text{TE}}$	1.0036	$1.0044^{+0.0088}_{-0.0088}$	$r_*$	144.72	$143.9^{+1.3}_{-1.8}$ (+0.2 $\sigma$ )	$\chi_{\text{CMB}}^2$	23432.0	$23450.4$ ( $\nu$ : 18.8) (+1533.2 $\sigma$ )
$c_{\text{EE}}$	1.0006	$1.0014^{+0.0086}_{-0.0086}$	$100\theta_*$	1.04104	$1.04092^{+0.00066}_{-0.00071}$ (+0.2 $\sigma$ )	$\chi_{\text{BAO}}^2$	4.37	$5.1$ ( $\nu$ : 0.6) (-0.2 $\sigma$ )

Best-fit  $\chi_{\text{eff}}^2 = 23439.76$ ;  $\Delta\chi_{\text{eff}}^2 = 10499.84$ ;  $\bar{\chi}_{\text{eff}}^2 = 23464.50$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 10489.63$ ;  $R - 1 = 0.02991$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.02 ( $\Delta$  -0.05) MGS: 1.34 ( $\Delta$  0.36) DR11CMass: 2.44 ( $\Delta$  -0.32) DR11LOWZ: 0.57 ( $\Delta$  -0.42) CMB - lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.47 ( $\Delta$  -0.43) CamSpec like\_v9.10CMH\_unified: 12935.51

## 12.21 base\_nnu\_meffsterile\_CamSpecHM\_TTTEEE\_lowTEB\_BAO\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02250^{+0.00032}_{-0.00031} \quad (+0.4\sigma)$	$H_0$	$68.0^{+1.4}_{-1.2} \quad (+0.0\sigma)$	$k_D$	$0.1413^{+0.0016}_{-0.0013} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1181^{+0.0058}_{-0.0072} \quad (-0.3\sigma)$	$\Omega_\Lambda$	$0.689^{+0.014}_{-0.014} \quad (+0.3\sigma)$	$100\theta_D$	$0.16086^{+0.00059}_{-0.00053} \quad (-0.7\sigma)$
$100\theta_{MC}$	$1.04078^{+0.00064}_{-0.00067} \quad (+0.2\sigma)$	$\Omega_m$	$0.311^{+0.014}_{-0.014} \quad (-0.3\sigma)$	$z_{eq}$	$3313^{+97}_{-130} \quad (-0.2\sigma)$
$\tau$	$0.084^{+0.035}_{-0.033} \quad (-0.2\sigma)$	$\Omega_m h^2$	$0.1437^{+0.0042}_{-0.0036} \quad (-0.3\sigma)$	$100\theta_{eq}$	$0.832^{+0.028}_{-0.020} \quad (+0.2\sigma)$
$m_{\nu, sterile}^{eff}$	$< 0.680 \quad (+0.1\sigma)$	$\Omega_\nu h^2$	$< 0.00788 \quad (+0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.07158^{+0.00077}_{-0.00075} \quad (+0.2\sigma)$
$N_{eff}$	$< 3.34 \quad (-0.2\sigma)$	$\Omega_m h^3$	$< 0.101 \quad (-0.2\sigma)$	$H(0.57)$	$93.6^{+1.4}_{-0.93} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.100^{+0.070}_{-0.065} \quad (-0.4\sigma)$	$\sigma_8$	$0.803^{+0.046}_{-0.050} \quad (-0.4\sigma)$	$D_A(0.57)$	$1379^{+19}_{-23} \quad (+0.0\sigma)$
$n_s$	$0.972^{+0.012}_{-0.011} \quad (+0.2\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.448^{+0.025}_{-0.026} \quad (-0.5\sigma)$	$F_{AP}(0.57)$	$0.6758^{+0.0034}_{-0.0035} \quad (-0.3\sigma)$
$y_{cal}$	$1.0004^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.033}_{-0.036} \quad (-0.5\sigma)$	$f\sigma_8(0.57)$	$0.467^{+0.026}_{-0.028} \quad (-0.4\sigma)$
$A_{100}^{PS}$	$245^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.974^{+0.053}_{-0.057} \quad (-0.4\sigma)$	$\sigma_8(0.57)$	$0.598^{+0.036}_{-0.038} \quad (-0.4\sigma)$
$A_{143}^{PS}$	$39^{+10}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.481^{+0.076}_{-0.075} \quad (-0.6\sigma)$	$Y_P^{BBN}$	$< 0.250 \quad (-0.5\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$z_{re}$	$10.4^{+2.9}_{-3.1} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.4\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.22^{+0.16}_{-0.14} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.4^{+3.8}_{-3.9} \quad (+0.1\sigma)$
$A_{143}^{tSZ}$	$< 6.71 \quad (-1.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.026}_{-0.023} \quad (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.5\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.21}$	$D_{40}$	$1224^{+26}_{-26} \quad (-0.6\sigma)$	$\chi_{lowTEB}^2$	$10496.5 \quad (\nu: 2.6) \quad (-0.5\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{220}$	$5715^{+75}_{-75} \quad (-0.4\sigma)$	$\chi_{CamSpec}^2$	$12954.1 \quad (\nu: 20.0)$
$A^{kSZ}$	—	$D_{810}$	$2531^{+26}_{-26} \quad (-0.4\sigma)$	$\chi_{H070p6}^2$	$0.64 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.37}$	$D_{1420}$	$814.6^{+9.2}_{-9.0} \quad (+0.1\sigma)$	$\chi_{6DF}^2$	$0.066 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$n_{s,0.002}$	$0.972^{+0.012}_{-0.011} \quad (+0.2\sigma)$	$\chi_{MGS}^2$	$1.26 \quad (\nu: 0.1) \quad (+0.2\sigma)$
$A_{217}^{dust}$	$1.21^{+0.22}_{-0.23}$	$Y_P$	$< 0.249 \quad (-0.5\sigma)$	$\chi_{DR11CMass}^2$	$2.92 \quad (\nu: 0.2) \quad (-0.2\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$Age/Gyr$	$13.72^{+0.12}_{-0.19} \quad (+0.2\sigma)$	$\chi_{DR11LOWZ}^2$	$0.83 \quad (\nu: 0.2) \quad (-0.2\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.87^{+0.58}_{-0.51} \quad (-0.7\sigma)$	$\chi_{prior}^2$	$8.9 \quad (\nu: 6.2) \quad (-1.9\sigma)$
$c_{217}$	$0.9971^{+0.0034}_{-0.0034} \quad (+0.8\sigma)$	$r_*$	$143.8^{+1.4}_{-1.9} \quad (+0.3\sigma)$	$\chi_{CMB}^2$	$23450.6 \quad (\nu: 19.3) \quad (+1525.3\sigma)$
$c_{TE}$	$1.0044^{+0.0088}_{-0.0088}$	$100\theta_*$	$1.04091^{+0.00068}_{-0.00074} \quad (+0.2\sigma)$	$\chi_{BAO}^2$	$5.07 \quad (\nu: 0.5) \quad (-0.2\sigma)$
$c_{EE}$	$1.0014^{+0.0086}_{-0.0087}$	$z_{drag}$	$1060.32^{+0.96}_{-0.87} \quad (+0.1\sigma)$		
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_{drag}$	$146.5^{+1.5}_{-2.0} \quad (+0.2\sigma)$		

$$\bar{\chi}_{eff}^2 = 23465.24; \Delta\bar{\chi}_{eff}^2 = 10489.67; R - 1 = 0.03423$$

## 12.22 base\_nnu\_meffsterile\_CamSpecHM\_TTTEEE\_lowTEB\_BAO\_post\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02250^{+0.00032}_{-0.00031} \quad (+0.4\sigma)$	$H_0$	$68.1^{+1.4}_{-1.3} \quad (+0.0\sigma)$	$k_D$	$0.1413^{+0.0016}_{-0.0013} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1180^{+0.0059}_{-0.0072} \quad (-0.3\sigma)$	$\Omega_\Lambda$	$0.690^{+0.013}_{-0.013} \quad (+0.3\sigma)$	$100\theta_D$	$0.16086^{+0.00060}_{-0.00053} \quad (-0.6\sigma)$
$100\theta_{MC}$	$1.04078^{+0.00064}_{-0.00067} \quad (+0.2\sigma)$	$\Omega_m$	$0.310^{+0.013}_{-0.013} \quad (-0.3\sigma)$	$z_{eq}$	$3312^{+96}_{-130} \quad (-0.2\sigma)$
$\tau$	$0.085^{+0.035}_{-0.033} \quad (-0.2\sigma)$	$\Omega_m h^2$	$0.1437^{+0.0043}_{-0.0036} \quad (-0.3\sigma)$	$100\theta_{eq}$	$0.832^{+0.028}_{-0.020} \quad (+0.2\sigma)$
$m_{\nu, sterile}^{eff}$	$< 0.677 \quad (+0.1\sigma)$	$\Omega_\nu h^2$	$< 0.00784 \quad (+0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.07162^{+0.00075}_{-0.00074} \quad (+0.2\sigma)$
$N_{eff}$	$< 3.35 \quad (-0.2\sigma)$	$\Omega_m h^3$	$< 0.102 \quad (-0.2\sigma)$	$H(0.57)$	$93.6^{+1.4}_{-0.94} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.101^{+0.069}_{-0.065} \quad (-0.4\sigma)$	$\sigma_8$	$0.804^{+0.046}_{-0.050} \quad (-0.4\sigma)$	$D_A(0.57)$	$1379^{+19}_{-24} \quad (+0.0\sigma)$
$n_s$	$0.972^{+0.012}_{-0.011} \quad (+0.2\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.448^{+0.025}_{-0.026} \quad (-0.5\sigma)$	$F_{AP}(0.57)$	$0.6757^{+0.0034}_{-0.0034} \quad (-0.3\sigma)$
$y_{cal}$	$1.0004^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.600^{+0.033}_{-0.036} \quad (-0.5\sigma)$	$f\sigma_8(0.57)$	$0.467^{+0.026}_{-0.028} \quad (-0.4\sigma)$
$A_{100}^{PS}$	$245^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.974^{+0.053}_{-0.057} \quad (-0.4\sigma)$	$\sigma_8(0.57)$	$0.598^{+0.036}_{-0.038} \quad (-0.4\sigma)$
$A_{143}^{PS}$	$39^{+20}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.481^{+0.076}_{-0.075} \quad (-0.6\sigma)$	$Y_P^{BBN}$	$< 0.250 \quad (-0.5\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$z_{re}$	$10.5^{+2.9}_{-3.0} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.4\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.22^{+0.16}_{-0.14} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.3^{+3.8}_{-4.0} \quad (+0.1\sigma)$
$A_{143}^{tSZ}$	$< 6.72 \quad (-1.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.026}_{-0.023} \quad (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.5\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.21}$	$D_{40}$	$1224^{+26}_{-26} \quad (-0.6\sigma)$	$\chi_{lowTEB}^2$	$10496.5 \quad (\nu: 2.7) \quad (-0.4\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{220}$	$5716^{+76}_{-75} \quad (-0.4\sigma)$	$\chi_{CamSpec}^2$	$12954.2 \quad (\nu: 20.2)$
$A^{kSZ}$	—	$D_{810}$	$2531^{+26}_{-26} \quad (-0.4\sigma)$	$\chi_{H070p6}^2$	$0.61 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.37}$	$D_{1420}$	$814.6^{+9.2}_{-9.0} \quad (+0.1\sigma)$	$\chi_{JLA}^2$	$706.75 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$n_{s,0.002}$	$0.972^{+0.012}_{-0.011} \quad (+0.2\sigma)$	$\chi_{6DF}^2$	$0.058 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{217}^{dust}$	$1.21^{+0.22}_{-0.23}$	$Y_P$	$< 0.249 \quad (-0.5\sigma)$	$\chi_{MGS}^2$	$1.30 \quad (\nu: 0.1) \quad (+0.2\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$Age/Gyr$	$13.72^{+0.12}_{-0.19} \quad (+0.2\sigma)$	$\chi_{DR11CMass}^2$	$2.86 \quad (\nu: 0.2) \quad (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.85^{+0.57}_{-0.54} \quad (-0.7\sigma)$	$\chi_{DR11LOWZ}^2$	$0.77 \quad (\nu: 0.2) \quad (-0.2\sigma)$
$c_{217}$	$0.9971^{+0.0034}_{-0.0034} \quad (+0.8\sigma)$	$r_*$	$143.9^{+1.4}_{-2.0} \quad (+0.3\sigma)$	$\chi_{prior}^2$	$8.9 \quad (\nu: 6.2) \quad (-1.9\sigma)$
$c_{TE}$	$1.0044^{+0.0088}_{-0.0088}$	$100\theta_*$	$1.04092^{+0.00068}_{-0.00074} \quad (+0.2\sigma)$	$\chi_{CMB}^2$	$23450.7 \quad (\nu: 19.4) \quad (+1524.5\sigma)$
$c_{EE}$	$1.0014^{+0.0086}_{-0.0087}$	$z_{drag}$	$1060.33^{+0.96}_{-0.88} \quad (+0.1\sigma)$	$\chi_{BAO}^2$	$5.00 \quad (\nu: 0.4) \quad (-0.1\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_{drag}$	$146.5^{+1.5}_{-2.0} \quad (+0.2\sigma)$		

$$\bar{\chi}_{eff}^2 = 24171.95; \Delta\bar{\chi}_{eff}^2 = 10489.66; R - 1 = 0.03493$$

## 12.23 base\_nnu\_meffsterile\_plikHM\_TT\_lowTEB\_lensing\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022285	$0.02247^{+0.00049}_{-0.00045}$	$\Omega_m h^2$	0.1421	$0.1459^{+0.0071}_{-0.0061}$	$r_{\text{drag}}$	147.26	$145.3^{+2.9}_{-3.6}$
$\Omega_c h^2$	0.1190	$0.1207^{+0.0074}_{-0.0081}$	$\Omega_\nu h^2$	0.00085	$< 0.00618$	$k_D$	0.14050	$0.1420^{+0.0027}_{-0.0023}$
$100\theta_{\text{MC}}$	1.04096	$1.04075^{+0.00095}_{-0.0010}$	$\Omega_m h^3$	0.0965	$0.1004^{+0.0075}_{-0.0058}$	$100\theta_D$	0.16103	$0.1614^{+0.0010}_{-0.00092}$
$\tau$	0.0679	$0.079^{+0.035}_{-0.034}$	$\sigma_8$	0.8137	$0.800^{+0.040}_{-0.044}$	$z_{\text{eq}}$	3361	$3308^{+91}_{-97}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.019	$< 0.521$	$\sigma_8 \Omega_m^{0.5}$	0.4518	$0.444^{+0.020}_{-0.022}$	$k_{\text{eq}}$	0.010282	$0.01029^{+0.00031}_{-0.00034}$
$N_{\text{eff}}$	3.080	$< 3.67$	$\sigma_8 \Omega_m^{0.25}$	0.6063	$0.596^{+0.027}_{-0.030}$	$100\theta_{\text{eq}}$	0.8207	$0.832^{+0.021}_{-0.019}$
$\ln(10^{10} A_s)$	3.067	$3.095^{+0.072}_{-0.069}$	$\sigma_8/h^{0.5}$	0.9875	$0.965^{+0.041}_{-0.047}$	$100\theta_{\text{s,eq}}$	0.4533	$0.459^{+0.011}_{-0.0098}$
$n_s$	0.9693	$0.977^{+0.019}_{-0.017}$	$\langle d^2 \rangle^{1/2}$	2.449	$2.451^{+0.053}_{-0.054}$	$r_{\text{drag}}/D_V(0.57)$	0.07176	$0.07171^{+0.00092}_{-0.00090}$
$y_{\text{cal}}$	1.00006	$1.0003^{+0.0049}_{-0.0048}$	$z_{\text{re}}$	9.03	$10.0^{+3.1}_{-3.0}$	$H(0.57)$	93.23	$94.5^{+2.5}_{-2.0}$
$A_{217}^{\text{CIB}}$	67.7	$66^{+10}_{-10}$	$10^9 A_s$	2.148	$2.21^{+0.16}_{-0.15}$	$D_A(0.57)$	1383.0	$1365^{+34}_{-41}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8754	$1.887^{+0.034}_{-0.032}$	$F_{\text{AP}}(0.57)$	0.67521	$0.6753^{+0.0042}_{-0.0042}$
$A_{143}^{\text{tSZ}}$	7.20	$4.8^{+3.9}_{-3.8}$	$D_{40}$	1222.7	$1215^{+29}_{-31}$	$f\sigma_8(0.57)$	0.4724	$0.465^{+0.021}_{-0.024}$
$A_{100}^{\text{PS}}$	254	$265^{+50}_{-60}$	$D_{220}$	5713	$5721^{+80}_{-78}$	$\sigma_8(0.57)$	0.6061	$0.596^{+0.032}_{-0.035}$
$A_{143}^{\text{PS}}$	39.7	$47^{+20}_{-20}$	$D_{810}$	2533.0	$2535^{+28}_{-27}$	$f_{2000}^{143}$	30.2	$32^{+6}_{-6}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{1420}$	814.5	$813^{+10}_{-9.9}$	$f_{2000}^{143 \times 217}$	32.79	$34^{+4}_{-4}$
$A_{217}^{\text{PS}}$	96.9	$96^{+20}_{-20}$	$D_{2000}$	230.00	$228.8^{+3.8}_{-4.0}$	$f_{2000}^{217}$	106.27	$107.6^{+4.3}_{-4.1}$
$A^{\text{kSZ}}$	0.0	—	$n_{\text{s}, 0.002}$	0.9693	$0.977^{+0.019}_{-0.017}$	$\chi_{\text{lensing}}^2$	9.19	$9.7 (\nu: 0.9)$
$A_{100}^{\text{dustTT}}$	7.42	$7.5^{+3.7}_{-3.7}$	$Y_{\text{P}}$	0.24582	$0.2488^{+0.0052}_{-0.0042}$	$\chi_{\text{lowTEB}}^2$	10494.76	$10495.1 (\nu: 1.2)$
$A_{143}^{\text{dustTT}}$	9.09	$9.1^{+3.6}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.24715	$0.2502^{+0.0052}_{-0.0042}$	$\chi_{\text{plik}}^2$	766.3	$781.5 (\nu: 16.8)$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.3^{+8.2}_{-8.2}$	$10^5 D/H$	2.619	$2.66^{+0.12}_{-0.11}$	$\chi_{6\text{DF}}^2$	0.010	$0.063 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	82.2	$82^{+10}_{-10}$	$\text{Age/Gyr}$	13.773	$13.60^{+0.27}_{-0.34}$	$\chi_{\text{MGS}}^2$	1.41	$1.44 (\nu: 0.2)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1089.98	$1090.24^{+0.84}_{-0.81}$	$\chi_{\text{DR11CMass}}^2$	2.41	$2.98 (\nu: 0.3)$
$c_{217}$	0.99603	$0.9961^{+0.0029}_{-0.0028}$	$r_*$	144.57	$142.7^{+2.8}_{-3.5}$	$\chi_{\text{DR11LOWZ}}^2$	0.48	$0.70 (\nu: 0.2)$
$H_0$	67.90	$68.8^{+2.4}_{-2.1}$	$100\theta_*$	1.04114	$1.0408^{+0.0011}_{-0.0012}$	$\chi_{\text{prior}}^2$	2.1	$7.5 (\nu: 6.4)$
$\Omega_\Lambda$	0.6917	$0.691^{+0.016}_{-0.017}$	$D_A/\text{Gpc}$	13.886	$13.71^{+0.26}_{-0.32}$	$\chi_{\text{CMB}}^2$	11270.3	$11286.3 (\nu: 16.5)$
$\Omega_m$	0.3083	$0.309^{+0.017}_{-0.016}$	$z_{\text{drag}}$	1059.70	$1060.5^{+1.6}_{-1.5}$	$\chi_{\text{BAO}}^2$	4.31	$5.2 (\nu: 0.7)$

Best-fit  $\chi_{\text{eff}}^2 = 11276.65$ ;  $\bar{\chi}_{\text{eff}}^2 = 11298.94$ ;  $R - 1 = 0.00736$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.41 DR11LOWZ: 0.48 CMB - smica\_g30\_ftl\_full\_pp: 9.19 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.76 plik\_dx11dr2\_HM\_v18\_TT: 766.32

## 12.24 base\_nnu\_meffsterile\_plikHM\_TT\_lowTEB\_lensing\_BAO\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022350	$0.02249^{+0.00048}_{-0.00044}$	$\Omega_\nu h^2$	0.00094	$0.0027^{+0.0033}_{-0.0027}$	$100\theta_D$	0.16109	$0.1615^{+0.0010}_{-0.00095}$
$\Omega_c h^2$	0.1192	$0.1210^{+0.0073}_{-0.0082}$	$\Omega_m h^3$	0.0973	$0.1008^{+0.0075}_{-0.0061}$	$z_{\text{eq}}$	3348	$3307^{+88}_{-94}$
$100\theta_{\text{MC}}$	1.04095	$1.04073^{+0.00096}_{-0.0010}$	$\sigma_8$	0.8149	$0.801^{+0.039}_{-0.043}$	$k_{\text{eq}}$	0.010270	$0.01029^{+0.00032}_{-0.00033}$
$\tau$	0.0720	$0.080^{+0.035}_{-0.034}$	$\sigma_8 \Omega_m^{0.5}$	0.4504	$0.444^{+0.020}_{-0.022}$	$100\theta_{\text{eq}}$	0.8232	$0.832^{+0.020}_{-0.018}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.028	$< 0.493$	$\sigma_8 \Omega_m^{0.25}$	0.6058	$0.597^{+0.027}_{-0.030}$	$100\theta_{\text{s,eq}}$	0.4546	$0.459^{+0.010}_{-0.0094}$
$N_{\text{eff}}$	3.121	$< 3.69$	$\sigma_8/h^{0.5}$	0.9861	$0.965^{+0.041}_{-0.046}$	$r_{\text{drag}}/D_V(0.57)$	0.07191	$0.07176^{+0.00090}_{-0.00089}$
$\ln(10^{10} A_s)$	3.076	$3.098^{+0.072}_{-0.069}$	$\langle d^2 \rangle^{1/2}$	2.448	$2.450^{+0.053}_{-0.054}$	$H(0.57)$	93.55	$94.6^{+2.5}_{-2.1}$
$n_s$	0.9718	$0.978^{+0.018}_{-0.017}$	$z_{\text{re}}$	9.40	$10.2^{+3.1}_{-3.0}$	$D_A(0.57)$	1376.7	$1363^{+35}_{-40}$
$y_{\text{cal}}$	1.00010	$1.0003^{+0.0049}_{-0.0049}$	$10^9 A_s$	2.167	$2.22^{+0.16}_{-0.15}$	$F_{\text{AP}}(0.57)$	0.67451	$0.6750^{+0.0041}_{-0.0041}$
$A_{217}^{\text{CIB}}$	67.9	$66^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8765	$1.888^{+0.034}_{-0.032}$	$f\sigma_8(0.57)$	0.4725	$0.466^{+0.021}_{-0.024}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1219.8	$1214^{+29}_{-30}$	$\sigma_8(0.57)$	0.6077	$0.598^{+0.031}_{-0.034}$
$A_{143}^{\text{tSZ}}$	7.15	$4.7^{+3.9}_{-3.8}$	$D_{220}$	5716	$5721^{+81}_{-79}$	$f_{2000}^{143}$	30.3	$32^{+6}_{-6}$
$A_{100}^{\text{PS}}$	255	$266^{+50}_{-60}$	$D_{810}$	2533.4	$2536^{+28}_{-27}$	$f_{2000}^{143 \times 217}$	32.83	$34^{+4}_{-4}$
$A_{143}^{\text{PS}}$	39.9	$47^{+20}_{-20}$	$D_{1420}$	814.7	$813^{+10}_{-9.9}$	$f_{2000}^{217}$	106.32	$107.6^{+4.3}_{-4.1}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{2000}$	229.98	$228.7^{+3.8}_{-4.0}$	$\chi_{\text{lensing}}^2$	9.11	$9.7 (\nu: 0.9)$
$A_{217}^{\text{PS}}$	96.7	$96^{+20}_{-20}$	$n_{s,0.002}$	0.9718	$0.978^{+0.018}_{-0.017}$	$\chi_{\text{lowTEB}}^2$	10494.59	$10495.0 (\nu: 1.2)$
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.24639	$0.2491^{+0.0052}_{-0.0044}$	$\chi_{\text{plik}}^2$	766.5	$781.6 (\nu: 16.9)$
$A_{100}^{\text{dustTT}}$	7.55	$7.5^{+3.7}_{-3.7}$	$Y_{\text{P}}^{\text{BBN}}$	0.24772	$0.2504^{+0.0052}_{-0.0044}$	$\chi_{\text{H070p6}}^2$	0.488	$0.36 (\nu: 0.0)$
$A_{143}^{\text{dustTT}}$	9.12	$9.1^{+3.6}_{-3.6}$	$10^5 D/H$	2.621	$2.66^{+0.12}_{-0.11}$	$\chi_{6\text{DF}}^2$	0.001	$0.056 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.3^{+8.3}_{-8.2}$	Age/Gyr	13.730	$13.58^{+0.28}_{-0.34}$	$\chi_{\text{MGS}}^2$	1.61	$1.50 (\nu: 0.2)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$z_*$	1089.96	$1090.24^{+0.85}_{-0.82}$	$\chi_{\text{DR11CMass}}^2$	2.44	$2.95 (\nu: 0.3)$
$c_{100}$	0.99789	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.28	$142.5^{+3.0}_{-3.5}$	$\chi_{\text{DR11LOWZ}}^2$	0.32	$0.64 (\nu: 0.2)$
$c_{217}$	0.99603	$0.9961^{+0.0029}_{-0.0028}$	$100\theta_*$	1.04110	$1.0408^{+0.0011}_{-0.0012}$	$\chi_{\text{prior}}^2$	2.1	$7.5 (\nu: 6.4)$
$H_0$	68.28	$68.9^{+2.4}_{-2.1}$	$D_A/\text{Gpc}$	13.858	$13.69^{+0.28}_{-0.32}$	$\chi_{\text{CMB}}^2$	11270.2	$11286.4 (\nu: 16.6)$
$\Omega_\Lambda$	0.6945	$0.692^{+0.016}_{-0.016}$	$z_{\text{drag}}$	1059.89	$1060.6^{+1.6}_{-1.5}$	$\chi_{\text{BAO}}^2$	4.37	$5.1 (\nu: 0.6)$
$\Omega_m$	0.3055	$0.308^{+0.016}_{-0.016}$	$r_{\text{drag}}$	146.95	$145.1^{+3.1}_{-3.6}$			
$\Omega_m h^2$	0.1424	$0.1462^{+0.0072}_{-0.0063}$	$k_D$	0.14073	$0.1421^{+0.0028}_{-0.0024}$			

Best-fit  $\chi_{\text{eff}}^2 = 11277.24$ ;  $\bar{\chi}_{\text{eff}}^2 = 11299.34$ ;  $R - 1 = 0.00640$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMass: 2.44 DR11LOWZ: 0.32 CMB - smica\_g30\_ftl\_full\_pp: 9.11 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.59 plik\_dx11dr2\_HM\_v18\_TT: 766.54 Hubble - H070p6: 0.49

## 12.25 base\_nnu\_meffsterile\_plikHM\_TT\_lowTEB\_lensing\_BAO\_post\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022345	$0.02250^{+0.00048}_{-0.00044}$	$\Omega_\nu h^2$	0.00085	$0.0026^{+0.0032}_{-0.0026}$	$100\theta_D$	0.16108	$0.1615^{+0.0010}_{-0.00095}$
$\Omega_c h^2$	0.1192	$0.1210^{+0.0074}_{-0.0083}$	$\Omega_m h^3$	0.0972	$0.1009^{+0.0075}_{-0.0062}$	$z_{\text{eq}}$	3352	$3305^{+87}_{-93}$
$100\theta_{\text{MC}}$	1.04098	$1.04073^{+0.00096}_{-0.0010}$	$\sigma_8$	0.8160	$0.802^{+0.039}_{-0.043}$	$k_{\text{eq}}$	0.010279	$0.01029^{+0.00032}_{-0.00033}$
$\tau$	0.0705	$0.081^{+0.035}_{-0.034}$	$\sigma_8 \Omega_m^{0.5}$	0.4511	$0.444^{+0.020}_{-0.022}$	$100\theta_{\text{eq}}$	0.8225	$0.832^{+0.020}_{-0.018}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.019	$< 0.484$	$\sigma_8 \Omega_m^{0.25}$	0.6067	$0.597^{+0.027}_{-0.029}$	$100\theta_{\text{s,eq}}$	0.4542	$0.459^{+0.010}_{-0.0093}$
$N_{\text{eff}}$	3.116	$< 3.69$	$\sigma_8/h^{0.5}$	0.9876	$0.966^{+0.041}_{-0.045}$	$r_{\text{drag}}/D_V(0.57)$	0.07191	$0.07180^{+0.00088}_{-0.00087}$
$\ln(10^{10} A_s)$	3.073	$3.099^{+0.071}_{-0.069}$	$\langle d^2 \rangle^{1/2}$	2.447	$2.450^{+0.053}_{-0.054}$	$H(0.57)$	93.54	$94.6^{+2.5}_{-2.1}$
$n_s$	0.9715	$0.978^{+0.018}_{-0.017}$	$z_{\text{re}}$	9.26	$10.2^{+3.1}_{-3.0}$	$D_A(0.57)$	1376.9	$1362^{+35}_{-40}$
$y_{\text{cal}}$	1.00018	$1.0003^{+0.0049}_{-0.0049}$	$10^9 A_s$	2.161	$2.22^{+0.16}_{-0.15}$	$F_{\text{AP}}(0.57)$	0.67453	$0.6749^{+0.0040}_{-0.0040}$
$A_{217}^{\text{CIB}}$	67.9	$66^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8772	$1.888^{+0.034}_{-0.032}$	$f\sigma_8(0.57)$	0.4732	$0.466^{+0.021}_{-0.024}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1220.3	$1213^{+29}_{-30}$	$\sigma_8(0.57)$	0.6086	$0.598^{+0.031}_{-0.034}$
$A_{143}^{\text{tSZ}}$	7.16	$4.7^{+3.9}_{-3.8}$	$D_{220}$	5716	$5722^{+80}_{-78}$	$f_{2000}^{143}$	30.2	$32^{+6}_{-6}$
$A_{100}^{\text{PS}}$	255	$266^{+50}_{-60}$	$D_{810}$	2534.1	$2536^{+28}_{-27}$	$f_{2000}^{143 \times 217}$	32.76	$34^{+5}_{-4}$
$A_{143}^{\text{PS}}$	39.7	$47^{+20}_{-20}$	$D_{1420}$	814.9	$813.5^{+9.9}_{-9.9}$	$f_{2000}^{217}$	106.25	$107.6^{+4.3}_{-4.1}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{2000}$	230.08	$228.8^{+3.8}_{-4.1}$	$\chi_{\text{lensing}}^2$	9.15	$9.7 (\nu: 0.9)$
$A_{217}^{\text{PS}}$	96.7	$96^{+20}_{-20}$	$n_{\text{s}, 0.002}$	0.9715	$0.978^{+0.018}_{-0.017}$	$\chi_{\text{lowTEB}}^2$	10494.55	$10495.0 (\nu: 1.2)$
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.24633	$0.2491^{+0.0052}_{-0.0044}$	$\chi_{\text{plik}}^2$	766.7	$781.7 (\nu: 16.9)$
$A_{100}^{\text{dustTT}}$	7.51	$7.5^{+3.7}_{-3.7}$	$Y_{\text{P}}^{\text{BBN}}$	0.24766	$0.2505^{+0.0052}_{-0.0044}$	$\chi_{\text{H070p6}}^2$	0.493	$0.34 (\nu: 0.0)$
$A_{143}^{\text{dustTT}}$	9.15	$9.1^{+3.6}_{-3.6}$	$10^5 D/H$	2.620	$2.66^{+0.12}_{-0.11}$	$\chi_{\text{JLA}}^2$	706.605	$706.68 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.9	$17.3^{+8.3}_{-8.2}$	$\text{Age/Gyr}$	13.732	$13.57^{+0.29}_{-0.34}$	$\chi_{6\text{DF}}^2$	0.001	$0.050 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$z_*$	1089.96	$1090.23^{+0.85}_{-0.82}$	$\chi_{\text{MGS}}^2$	1.61	$1.55 (\nu: 0.2)$
$c_{100}$	0.99794	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.29	$142.5^{+3.0}_{-3.5}$	$\chi_{\text{DR11CMass}}^2$	2.44	$2.92 (\nu: 0.2)$
$c_{217}$	0.99600	$0.9961^{+0.0029}_{-0.0028}$	$100\theta_*$	1.04113	$1.0408^{+0.0011}_{-0.0012}$	$\chi_{\text{DR11LOWZ}}^2$	0.32	$0.58 (\nu: 0.2)$
$H_0$	68.27	$69.0^{+2.3}_{-2.1}$	$D_A/\text{Gpc}$	13.859	$13.69^{+0.28}_{-0.33}$	$\chi_{\text{prior}}^2$	2.0	$7.5 (\nu: 6.4)$
$\Omega_\Lambda$	0.6944	$0.693^{+0.015}_{-0.016}$	$z_{\text{drag}}$	1059.89	$1060.6^{+1.6}_{-1.5}$	$\chi_{\text{CMB}}^2$	11270.4	$11286.4 (\nu: 16.6)$
$\Omega_m$	0.3056	$0.307^{+0.016}_{-0.015}$	$r_{\text{drag}}$	146.96	$145.1^{+3.1}_{-3.6}$	$\chi_{\text{BAO}}^2$	4.37	$5.1 (\nu: 0.6)$
$\Omega_m h^2$	0.1424	$0.1461^{+0.0072}_{-0.0063}$	$k_D$	0.14072	$0.1421^{+0.0028}_{-0.0024}$			

Best-fit  $\chi_{\text{eff}}^2 = 11983.85$ ;  $\bar{\chi}_{\text{eff}}^2 = 12005.95$ ;  $R - 1 = 0.00629$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMass: 2.44 DR11LOWZ: 0.32 CMB - smica\_g30\_ftl\_full\_pp: 9.15 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.55 plik\_dx11dr2\_HM\_v18\_TT: 766.65 Hubble - H070p6: 0.49 SN - JLA December\_2013: 706.61

## 12.26 base\_nnu\_meffsterile\_plikHM\_TTTEEE\_lowTEB\_lensing\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022287	$0.02241^{+0.00035}_{-0.00032}$	$A_{143}^{\text{dust}TE}$	0.155	$0.15^{+0.11}_{-0.11}$	$r_*$	144.80	$143.6^{+1.6}_{-2.1}$
$\Omega_c h^2$	0.1188	$0.1191^{+0.0063}_{-0.0066}$	$A_{143 \times 217}^{\text{dust}TE}$	0.336	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04112	$1.04087^{+0.00075}_{-0.00079}$
$100\theta_{\text{MC}}$	1.04093	$1.04075^{+0.00066}_{-0.00070}$	$A_{217}^{\text{dust}TE}$	1.66	$1.66^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	13.909	$13.80^{+0.15}_{-0.20}$
$\tau$	0.0660	$0.072^{+0.028}_{-0.027}$	$c_{100}$	0.99814	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.67	$1060.2^{+1.1}_{-0.97}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.002	$< 0.577$	$c_{217}$	0.99606	$0.9961^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.50	$146.3^{+1.7}_{-2.2}$
$N_{\text{eff}}$	3.047	$< 3.39$	$H_0$	67.71	$67.9^{+1.5}_{-1.4}$	$k_D$	0.14037	$0.1413^{+0.0017}_{-0.0014}$
$\ln(10^{10} A_s)$	3.063	$3.078^{+0.057}_{-0.053}$	$\Omega_\Lambda$	0.6909	$0.687^{+0.014}_{-0.014}$	$100\theta_D$	0.16091	$0.16107^{+0.00057}_{-0.00052}$
$n_s$	0.9667	$0.970^{+0.013}_{-0.012}$	$\Omega_m$	0.3091	$0.313^{+0.014}_{-0.014}$	$z_{\text{eq}}$	3371	$3326^{+90}_{-110}$
$y_{\text{cal}}$	1.00011	$1.0003^{+0.0049}_{-0.0048}$	$\Omega_m h^2$	0.14173	$0.1443^{+0.0046}_{-0.0039}$	$k_{\text{eq}}$	0.010289	$0.01026^{+0.00029}_{-0.00032}$
$A_{217}^{\text{CIB}}$	68.0	$65^{+10}_{-10}$	$\Omega_\nu h^2$	0.00066	$< 0.00677$	$100\theta_{\text{eq}}$	0.8187	$0.829^{+0.023}_{-0.019}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m h^3$	0.09597	$0.0981^{+0.0044}_{-0.0030}$	$100\theta_{\text{s,eq}}$	0.4523	$0.457^{+0.012}_{-0.0098}$
$A_{143}^{\text{tSZ}}$	7.31	$5.2^{+3.7}_{-3.8}$	$\sigma_8$	0.8154	$0.796^{+0.038}_{-0.042}$	$r_{\text{drag}}/D_V(0.57)$	0.07171	$0.07148^{+0.00076}_{-0.00078}$
$A_{100}^{\text{PS}}$	257	$264^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4534	$0.445^{+0.020}_{-0.022}$	$H(0.57)$	93.03	$93.6^{+1.5}_{-1.1}$
$A_{143}^{\text{PS}}$	38.6	$45^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6080	$0.596^{+0.026}_{-0.030}$	$D_A(0.57)$	1386.3	$1380^{+21}_{-26}$
$A_{143 \times 217}^{\text{PS}}$	32	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9909	$0.966^{+0.042}_{-0.048}$	$F_{\text{AP}}(0.57)$	0.67543	$0.6763^{+0.0036}_{-0.0035}$
$A_{217}^{\text{PS}}$	96.3	$96^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4541	$2.459^{+0.049}_{-0.049}$	$f\sigma_8(0.57)$	0.4735	$0.464^{+0.021}_{-0.024}$
$A^{\text{kSZ}}$	0.0	—	$z_{\text{re}}$	8.83	$9.4^{+2.5}_{-2.6}$	$\sigma_8(0.57)$	0.6072	$0.592^{+0.030}_{-0.033}$
$A_{100}^{\text{dust}TT}$	7.50	$7.5^{+3.7}_{-3.7}$	$10^9 A_s$	2.140	$2.17^{+0.13}_{-0.11}$	$f_{2000}^{143}$	29.8	$31^{+5}_{-5}$
$A_{143}^{\text{dust}TT}$	9.11	$9.1^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8755	$1.882^{+0.026}_{-0.024}$	$f_{2000}^{143 \times 217}$	32.54	$33^{+4}_{-4}$
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.3^{+8.2}_{-8.1}$	$D_{40}$	1228.7	$1225^{+24}_{-25}$	$f_{2000}^{217}$	106.08	$106.8^{+3.7}_{-3.6}$
$A_{217}^{\text{dust}TT}$	81.7	$82^{+10}_{-10}$	$D_{220}$	5723	$5728^{+75}_{-75}$	$\chi^2_{\text{lensing}}$	9.64	$10.2 (\nu: 1.4)$
$A_{100}^{\text{dust}EE}$	0.0814	$0.082^{+0.011}_{-0.011}$	$D_{810}$	2533.7	$2535^{+26}_{-26}$	$\chi^2_{\text{lowTEB}}$	10495.23	$10495.5 (\nu: 0.7)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0491	$0.0493^{+0.0097}_{-0.0099}$	$D_{1420}$	814.7	$814.2^{+9.2}_{-9.3}$	$\chi^2_{\text{plik}}$	2435.2	$2455.5 (\nu: 24.7)$
$A_{100 \times 217}^{\text{dust}EE}$	0.0999	$0.099^{+0.064}_{-0.063}$	$D_{2000}$	230.18	$229.5^{+3.1}_{-3.2}$	$\chi^2_{6\text{DF}}$	0.015	$0.086 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1005	$0.101^{+0.013}_{-0.013}$	$n_{\text{s}, 0.002}$	0.9667	$0.970^{+0.013}_{-0.012}$	$\chi^2_{\text{MGS}}$	1.34	$1.14 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.225	$0.224^{+0.090}_{-0.090}$	$Y_{\text{P}}$	0.24536	$0.2471^{+0.0031}_{-0.0022}$	$\chi^2_{\text{DR11CMass}}$	2.42	$3.05 (\nu: 0.4)$
$A_{217}^{\text{dust}EE}$	0.651	$0.65^{+0.25}_{-0.25}$	$Y_{\text{P}}^{\text{BBN}}$	0.24669	$0.2484^{+0.0031}_{-0.0022}$	$\chi^2_{\text{DR11LOWZ}}$	0.54	$0.99 (\nu: 0.2)$
$A_{100}^{\text{dust}TE}$	0.140	$0.141^{+0.074}_{-0.075}$	$10^5 \text{D}/\text{H}$	2.607	$2.628^{+0.069}_{-0.067}$	$\chi^2_{\text{prior}}$	7.1	$19.7 (\nu: 15.3)$
$A_{100 \times 143}^{\text{dust}TE}$	0.130	$0.131^{+0.057}_{-0.057}$	$\text{Age}/\text{Gyr}$	13.800	$13.71^{+0.15}_{-0.21}$	$\chi^2_{\text{CMB}}$	12940.0	$12961.1 (\nu: 23.6)$
$A_{100 \times 217}^{\text{dust}TE}$	0.305	$0.30^{+0.16}_{-0.17}$	$z_*$	1089.92	$1090.07^{+0.55}_{-0.51}$	$\chi^2_{\text{BAO}}$	4.33	$5.3 (\nu: 0.8)$

Best-fit  $\chi^2_{\text{eff}} = 12951.48$ ;  $\bar{\chi}^2_{\text{eff}} = 12986.10$ ;  $R - 1 = 0.01261$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.34 DR11CMass: 2.42 DR11LOWZ: 0.54 CMB - smica\_g30\_ftl\_full\_pp: 9.64 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.23 plik\_dx11dr2\_HM\_v18\_TTT

2435.16



## 12.27 base\_nnu\_meffsterile\_plikHM\_TTTEEE\_lowTEB\_lensing\_BAO\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022295	$0.02243^{+0.00035}_{-0.00032}$	$A_{143 \times 217}^{\text{dust}TE}$	0.340	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.903	$13.79^{+0.16}_{-0.21}$
$\Omega_c h^2$	0.1190	$0.1193^{+0.0064}_{-0.0066}$	$A_{217}^{\text{dust}TE}$	1.66	$1.66^{+0.50}_{-0.50}$	$z_{\text{drag}}$	1059.70	$1060.2^{+1.1}_{-0.99}$
$100\theta_{\text{MC}}$	1.04094	$1.04075^{+0.00067}_{-0.00072}$	$c_{100}$	0.99815	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.44	$146.2^{+1.8}_{-2.4}$
$\tau$	0.0650	$0.073^{+0.028}_{-0.026}$	$c_{217}$	0.99609	$0.9961^{+0.0028}_{-0.0028}$	$k_D$	0.14044	$0.1414^{+0.0018}_{-0.0015}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.000	$< 0.552$	$H_0$	67.67	$68.0^{+1.6}_{-1.4}$	$100\theta_D$	0.16090	$0.16108^{+0.00060}_{-0.00054}$
$N_{\text{eff}}$	3.047	$< 3.41$	$\Omega_\Lambda$	0.6901	$0.688^{+0.014}_{-0.014}$	$z_{\text{eq}}$	3375	$3326^{+87}_{-100}$
$\ln(10^{10} A_s)$	3.062	$3.080^{+0.057}_{-0.052}$	$\Omega_m$	0.3099	$0.312^{+0.014}_{-0.014}$	$k_{\text{eq}}$	0.010303	$0.01026^{+0.00029}_{-0.00032}$
$n_s$	0.9662	$0.971^{+0.013}_{-0.012}$	$\Omega_m h^2$	0.14191	$0.1444^{+0.0049}_{-0.0040}$	$100\theta_{\text{eq}}$	0.8179	$0.829^{+0.022}_{-0.018}$
$y_{\text{cal}}$	0.99989	$1.0003^{+0.0049}_{-0.0048}$	$\Omega_\nu h^2$	0.00065	$< 0.00651$	$100\theta_{s, \text{eq}}$	0.4518	$0.457^{+0.012}_{-0.0095}$
$A_{217}^{\text{CIB}}$	67.8	$65^{+10}_{-10}$	$\Omega_m h^3$	0.09603	$0.0983^{+0.0046}_{-0.0032}$	$r_{\text{drag}}/D_V(0.57)$	0.07166	$0.07153^{+0.00076}_{-0.00077}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\sigma_8$	0.8154	$0.798^{+0.038}_{-0.042}$	$H(0.57)$	93.02	$93.7^{+1.6}_{-1.2}$
$A_{143}^{\text{tSZ}}$	7.31	$5.2^{+3.7}_{-3.9}$	$\sigma_8 \Omega_m^{0.5}$	0.4540	$0.446^{+0.019}_{-0.022}$	$D_A(0.57)$	1386.9	$1378^{+22}_{-27}$
$A_{100}^{\text{PS}}$	257	$264^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6084	$0.596^{+0.026}_{-0.030}$	$F_{\text{AP}}(0.57)$	0.67564	$0.6761^{+0.0036}_{-0.0035}$
$A_{143}^{\text{PS}}$	38.5	$45^{+10}_{-20}$	$\sigma_8/h^{0.5}$	0.9913	$0.967^{+0.041}_{-0.047}$	$f\sigma_8(0.57)$	0.4737	$0.464^{+0.021}_{-0.023}$
$A_{143 \times 217}^{\text{PS}}$	32	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4547	$2.458^{+0.050}_{-0.049}$	$\sigma_8(0.57)$	0.6070	$0.594^{+0.030}_{-0.033}$
$A_{217}^{\text{PS}}$	96.3	$96^{+20}_{-20}$	$z_{\text{re}}$	8.74	$9.4^{+2.5}_{-2.6}$	$f_{2000}^{143}$	29.8	$31^{+5}_{-5}$
$A^{\text{kSZ}}$	0.0	—	$10^9 A_s$	2.136	$2.18^{+0.13}_{-0.12}$	$f_{2000}^{143 \times 217}$	32.53	$33^{+4}_{-4}$
$A_{100}^{\text{dust}TT}$	7.43	$7.5^{+3.6}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8758	$1.883^{+0.026}_{-0.024}$	$f_{2000}^{217}$	106.04	$106.7^{+3.7}_{-3.6}$
$A_{143}^{\text{dust}TT}$	9.06	$9.1^{+3.6}_{-3.6}$	$D_{40}$	1229.4	$1224^{+25}_{-25}$	$\chi^2_{\text{lensing}}$	9.71	$10.2 (\nu: 1.4)$
$A_{143 \times 217}^{\text{dust}TT}$	17.7	$17.3^{+8.2}_{-8.0}$	$D_{220}$	5724	$5729^{+75}_{-74}$	$\chi^2_{\text{lowTEB}}$	10495.32	$10495.4 (\nu: 0.7)$
$A_{217}^{\text{dust}TT}$	81.9	$82^{+10}_{-10}$	$D_{810}$	2533.2	$2535^{+27}_{-26}$	$\chi^2_{\text{plik}}$	2434.9	$2455.6 (\nu: 25.0)$
$A_{100}^{\text{dust}EE}$	0.0814	$0.082^{+0.011}_{-0.011}$	$D_{1420}$	814.5	$814.2^{+9.3}_{-9.3}$	$\chi^2_{\text{H070p6}}$	0.78	$0.63 (\nu: 0.0)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0491	$0.0494^{+0.0097}_{-0.0099}$	$D_{2000}$	230.12	$229.5^{+3.1}_{-3.2}$	$\chi^2_{6\text{DF}}$	0.022	$0.076 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.099^{+0.064}_{-0.064}$	$n_{s, 0.002}$	0.9662	$0.971^{+0.013}_{-0.012}$	$\chi^2_{\text{MGS}}$	1.28	$1.19 (\nu: 0.1)$
$A_{143}^{\text{dust}EE}$	0.1004	$0.101^{+0.013}_{-0.013}$	$Y_P$	0.24537	$0.2472^{+0.0033}_{-0.0023}$	$\chi^2_{\text{DR11CMass}}$	2.45	$2.98 (\nu: 0.3)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.224^{+0.091}_{-0.090}$	$Y_P^{\text{BBN}}$	0.24670	$0.2486^{+0.0033}_{-0.0023}$	$\chi^2_{\text{DR11LOWZ}}$	0.61	$0.91 (\nu: 0.2)$
$A_{217}^{\text{dust}EE}$	0.655	$0.65^{+0.25}_{-0.25}$	$10^5 D/H$	2.606	$2.628^{+0.072}_{-0.069}$	$\chi^2_{\text{prior}}$	7.1	$19.7 (\nu: 15.5)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.074}_{-0.074}$	$\text{Age/Gyr}$	13.800	$13.70^{+0.16}_{-0.22}$	$\chi^2_{\text{CMB}}$	12940.0	$12961.3 (\nu: 23.8)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.131^{+0.057}_{-0.057}$	$z_*$	1089.92	$1090.07^{+0.57}_{-0.52}$	$\chi^2_{\text{BAO}}$	4.36	$5.2 (\nu: 0.6)$
$A_{100 \times 217}^{\text{dust}TE}$	0.305	$0.30^{+0.16}_{-0.16}$	$r_*$	144.75	$143.6^{+1.7}_{-2.3}$			
$A_{143}^{\text{dust}TE}$	0.156	$0.15^{+0.11}_{-0.11}$	$100\theta_*$	1.04112	$1.04086^{+0.00077}_{-0.00081}$			

Best-fit  $\chi^2_{\text{eff}} = 12952.25$ ;  $\bar{\chi}^2_{\text{eff}} = 12986.75$ ;  $R - 1 = 0.01360$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.02 MGS: 1.28 DR11CMASS: 2.45 DR11LOWZ: 0.61 CMB - smica\_g30\_ftl\_full\_pp: 9.71 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.32 plik\_dx11dr2\_HM\_v18\_TT+  
2434.95 Hubble - H070p6: 0.78

12.28 base\_nnu\_meffsterile\_plikHM\_TTTEEE\_lowTEB\_lensing\_BAO\_post\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022305	$0.02243^{+0.00035}_{-0.00032}$	$A_{143 \times 217}^{\text{dust}TE}$	0.339	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.899	$13.79^{+0.16}_{-0.21}$
$\Omega_c h^2$	0.1189	$0.1192^{+0.0064}_{-0.0066}$	$A_{217}^{\text{dust}TE}$	1.66	$1.66^{+0.50}_{-0.50}$	$z_{\text{drag}}$	1059.70	$1060.2^{+1.1}_{-0.99}$
$100\theta_{\text{MC}}$	1.04090	$1.04076^{+0.00067}_{-0.00073}$	$c_{100}$	0.99819	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.39	$146.2^{+1.8}_{-2.4}$
$\tau$	0.0676	$0.073^{+0.028}_{-0.026}$	$c_{217}$	0.99606	$0.9961^{+0.0028}_{-0.0028}$	$k_D$	0.14045	$0.1414^{+0.0018}_{-0.0015}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.000	$< 0.542$	$H_0$	67.83	$68.1^{+1.6}_{-1.4}$	$100\theta_D$	0.16093	$0.16108^{+0.00060}_{-0.00054}$
$N_{\text{eff}}$	3.059	$< 3.41$	$\Omega_\Lambda$	0.6917	$0.689^{+0.013}_{-0.014}$	$z_{\text{eq}}$	3368	$3325^{+86}_{-100}$
$\ln(10^{10} A_s)$	3.067	$3.081^{+0.057}_{-0.052}$	$\Omega_m$	0.3083	$0.311^{+0.014}_{-0.013}$	$k_{\text{eq}}$	0.010289	$0.01026^{+0.00029}_{-0.00032}$
$n_s$	0.9674	$0.971^{+0.013}_{-0.012}$	$\Omega_m h^2$	0.14184	$0.1443^{+0.0048}_{-0.0040}$	$100\theta_{\text{eq}}$	0.8192	$0.829^{+0.022}_{-0.018}$
$y_{\text{cal}}$	1.00005	$1.0003^{+0.0049}_{-0.0048}$	$\Omega_\nu h^2$	0.00065	$< 0.00641$	$100\theta_{s, \text{eq}}$	0.4525	$0.457^{+0.012}_{-0.0093}$
$A_{217}^{\text{CIB}}$	67.9	$65^{+10}_{-10}$	$\Omega_m h^3$	0.09622	$0.0983^{+0.0047}_{-0.0033}$	$r_{\text{drag}}/D_V(0.57)$	0.07176	$0.07157^{+0.00075}_{-0.00075}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$\sigma_8$	0.8172	$0.799^{+0.038}_{-0.041}$	$H(0.57)$	93.14	$93.7^{+1.6}_{-1.2}$
$A_{143}^{\text{tSZ}}$	7.30	$5.2^{+3.7}_{-3.9}$	$\sigma_8 \Omega_m^{0.5}$	0.4537	$0.446^{+0.019}_{-0.022}$	$D_A(0.57)$	1384.3	$1377^{+22}_{-27}$
$A_{100}^{\text{PS}}$	257	$264^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6089	$0.597^{+0.026}_{-0.029}$	$F_{\text{AP}}(0.57)$	0.67521	$0.6759^{+0.0035}_{-0.0034}$
$A_{143}^{\text{PS}}$	38.7	$45^{+10}_{-20}$	$\sigma_8/h^{0.5}$	0.9922	$0.968^{+0.040}_{-0.046}$	$f\sigma_8(0.57)$	0.4743	$0.465^{+0.020}_{-0.023}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4556	$2.458^{+0.050}_{-0.049}$	$\sigma_8(0.57)$	0.6087	$0.594^{+0.030}_{-0.032}$
$A_{217}^{\text{PS}}$	96.3	$96^{+20}_{-20}$	$z_{\text{re}}$	8.99	$9.5^{+2.5}_{-2.5}$	$f_{2000}^{143}$	29.8	$31^{+5}_{-5}$
$A^{\text{kSZ}}$	0.0	—	$10^9 A_s$	2.148	$2.18^{+0.13}_{-0.12}$	$f_{2000}^{143 \times 217}$	32.53	$33^{+4}_{-4}$
$A_{100}^{\text{dust}TT}$	7.47	$7.5^{+3.6}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8758	$1.883^{+0.027}_{-0.024}$	$f_{2000}^{217}$	106.03	$106.7^{+3.7}_{-3.6}$
$A_{143}^{\text{dust}TT}$	9.01	$9.1^{+3.6}_{-3.6}$	$D_{40}$	1227.9	$1224^{+25}_{-25}$	$\chi^2_{\text{lensing}}$	9.83	$10.2 (\nu: 1.4)$
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.3^{+8.2}_{-8.0}$	$D_{220}$	5723	$5729^{+75}_{-74}$	$\chi^2_{\text{lowTEB}}$	10495.20	$10495.4 (\nu: 0.8)$
$A_{217}^{\text{dust}TT}$	81.7	$82^{+10}_{-10}$	$D_{810}$	2533.4	$2535^{+27}_{-26}$	$\chi^2_{\text{plik}}$	2435.1	$2455.7 (\nu: 25.1)$
$A_{100}^{\text{dust}EE}$	0.0816	$0.082^{+0.011}_{-0.011}$	$D_{1420}$	814.6	$814.3^{+9.3}_{-9.3}$	$\chi^2_{\text{H070p6}}$	0.69	$0.61 (\nu: 0.0)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0494	$0.0495^{+0.0097}_{-0.0099}$	$D_{2000}$	230.17	$229.5^{+3.1}_{-3.2}$	$\chi^2_{\text{JLA}}$	706.663	$706.78 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.101	$0.099^{+0.064}_{-0.064}$	$n_{s, 0.002}$	0.9674	$0.971^{+0.013}_{-0.012}$	$\chi^2_{6\text{DF}}$	0.011	$0.067 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1006	$0.101^{+0.013}_{-0.013}$	$Y_P$	0.24554	$0.2472^{+0.0033}_{-0.0023}$	$\chi^2_{\text{MGS}}$	1.41	$1.24 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.225	$0.224^{+0.091}_{-0.090}$	$Y_P^{\text{BBN}}$	0.24687	$0.2486^{+0.0033}_{-0.0024}$	$\chi^2_{\text{DR11CMass}}$	2.41	$2.92 (\nu: 0.2)$
$A_{217}^{\text{dust}EE}$	0.651	$0.65^{+0.25}_{-0.25}$	$10^5 D/H$	2.608	$2.626^{+0.072}_{-0.069}$	$\chi^2_{\text{DR11LOWZ}}$	0.49	$0.85 (\nu: 0.2)$
$A_{100}^{\text{dust}TE}$	0.140	$0.141^{+0.074}_{-0.074}$	$\text{Age}/\text{Gyr}$	13.787	$13.70^{+0.16}_{-0.22}$	$\chi^2_{\text{prior}}$	7.1	$19.7 (\nu: 15.5)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.057}_{-0.057}$	$z_*$	1089.92	$1090.05^{+0.56}_{-0.51}$	$\chi^2_{\text{CMB}}$	12940.2	$12961.3 (\nu: 23.9)$
$A_{100 \times 217}^{\text{dust}TE}$	0.304	$0.30^{+0.16}_{-0.16}$	$r_*$	144.70	$143.6^{+1.7}_{-2.3}$	$\chi^2_{\text{BAO}}$	4.32	$5.1 (\nu: 0.5)$
$A_{143}^{\text{dust}TE}$	0.155	$0.15^{+0.11}_{-0.11}$	$100\theta_*$	1.04109	$1.04087^{+0.00077}_{-0.00082}$			

Best-fit  $\chi^2_{\text{eff}} = 13658.95$ ;  $\bar{\chi}^2_{\text{eff}} = 13693.43$ ;  $R - 1 = 0.01427$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.41 DR11LOWZ: 0.49 CMB - smica\_g30\_ftl\_full\_pp: 9.83 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.20 plik\_dx11dr2\_HM\_v18\_TTT 2435.15 Hubble - H070p6: 0.69 SN - JLA December\_2013: 706.66

## 12.29 base\_nnu\_meffsterile\_CamSpecHM\_TT\_lowTEB\_lensing\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022251	$0.02246^{+0.00049}_{-0.00045} \quad (-0.0\sigma)$	$\Omega_\Lambda$	0.6925	$0.691^{+0.016}_{-0.017} \quad (-0.0\sigma)$	$k_D$	0.14037	$0.1419^{+0.0027}_{-0.0023} \quad (-0.1\sigma)$
$\Omega_c h^2$	0.1188	$0.1203^{+0.0074}_{-0.0087} \quad (-0.1\sigma)$	$\Omega_m$	0.3075	$0.309^{+0.017}_{-0.016} \quad (+0.0\sigma)$	$100\theta_D$	0.16105	$0.1614^{+0.0010}_{-0.00090} \quad (-0.1\sigma)$
$100\theta_{MC}$	1.04101	$1.04080^{+0.00094}_{-0.0010} \quad (+0.1\sigma)$	$\Omega_m h^2$	0.1418	$0.1457^{+0.0070}_{-0.0059} \quad (-0.1\sigma)$	$z_{eq}$	3358	$3306^{+97}_{-100} \quad (-0.1\sigma)$
$\tau$	0.0699	$0.081^{+0.035}_{-0.034} \quad (+0.1\sigma)$	$\Omega_\nu h^2$	0.00079	$< 0.00674 \quad (+0.1\sigma)$	$100\theta_{eq}$	0.8210	$0.833^{+0.023}_{-0.020} \quad (+0.1\sigma)$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.014	$< 0.573 \quad (+0.1\sigma)$	$\Omega_m h^3$	0.0963	$< 0.107 \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	0.07182	$0.07172^{+0.00093}_{-0.00090} \quad (+0.0\sigma)$
$N_{\text{eff}}$	3.073	$< 3.65 \quad (-0.1\sigma)$	$\sigma_8$	0.8147	$0.800^{+0.041}_{-0.046} \quad (+0.0\sigma)$	$H(0.57)$	93.19	$94.4^{+2.4}_{-1.9} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	3.067	$3.096^{+0.072}_{-0.069} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4518	$0.444^{+0.021}_{-0.023} \quad (+0.0\sigma)$	$D_A(0.57)$	1383.1	$1367^{+33}_{-40} \quad (+0.1\sigma)$
$n_s$	0.9697	$0.978^{+0.018}_{-0.016} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.6067	$0.596^{+0.028}_{-0.032} \quad (+0.0\sigma)$	$F_{AP}(0.57)$	0.67502	$0.6753^{+0.0042}_{-0.0042} \quad (+0.0\sigma)$
$y_{\text{cal}}$	0.99960	$1.0002^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	0.9886	$0.965^{+0.043}_{-0.050} \quad (+0.0\sigma)$	$f\sigma_8(0.57)$	0.4728	$0.465^{+0.022}_{-0.026} \quad (-0.0\sigma)$
$A_{100}^{\text{PS}}$	251.8	$252^{+40}_{-40} \quad (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	2.447	$2.450^{+0.053}_{-0.054} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	0.6071	$0.596^{+0.033}_{-0.036} \quad (+0.0\sigma)$
$A_{143}^{\text{PS}}$	36.2	$42^{+20}_{-20} \quad (-0.6\sigma)$	$z_{\text{re}}$	9.21	$10.2^{+3.1}_{-3.0} \quad (+0.1\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	0.24661	$< 0.254 \quad (-0.3\sigma)$
$A_{217}^{\text{PS}}$	93.8	$96^{+30}_{-30} \quad (+0.0\sigma)$	$10^9 A_s$	2.148	$2.21^{+0.16}_{-0.15} \quad (+0.0\sigma)$	$f_{2000}^{143}$	30.1	$31^{+6}_{-6} \quad (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	48.4	$48^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	1.8681	$1.882^{+0.033}_{-0.031} \quad (-0.3\sigma)$	$f_{2000}^{217}$	107.14	$107.8^{+4.3}_{-4.1} \quad (+0.1\sigma)$
$A_{143}^{\text{tSZ}}$	2.95	$< 6.30 \quad (-0.9\sigma)$	$D_{40}$	1217.8	$1209^{+28}_{-29} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	32.49	$33^{+5}_{-4} \quad (-0.4\sigma)$
$r_{143 \times 217}^{\text{PS}}$	0.407	$0.51^{+0.21}_{-0.20}$	$D_{220}$	5689	$5700^{+79}_{-78} \quad (-0.5\sigma)$	$\chi^2_{\text{lensing}}$	8.94	$9.7 \quad (\nu: 0.8) \quad (-0.0\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{810}$	2524.8	$2532^{+27}_{-27} \quad (-0.3\sigma)$	$\chi^2_{\text{lowTEB}}$	10494.57	$10494.8 \quad (\nu: 1.2) \quad (-0.2\sigma)$
$A^{\text{kSZ}}$	5.7	—	$D_{1420}$	812.2	$813^{+10}_{-10} \quad (-0.0\sigma)$	$\chi^2_{\text{CamSpec}}$	8046.9	$8063.0 \quad (\nu: 18.0)$
$A_{100}^{\text{dust}}$	1.008	$0.997^{+0.38}_{-0.38}$	$n_{s,0.002}$	0.9697	$0.978^{+0.018}_{-0.016} \quad (+0.1\sigma)$	$\chi^2_{6\text{DF}}$	0.006	$0.062 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{143}^{\text{dust}}$	1.069	$1.03^{+0.36}_{-0.36}$	$Y_{\text{P}}$	0.24528	$< 0.253 \quad (-0.3\sigma)$	$\chi^2_{\text{MGS}}$	1.47	$1.44 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$A_{217}^{\text{dust}}$	1.208	$1.21^{+0.23}_{-0.23}$	Age/Gyr	13.780	$13.61^{+0.26}_{-0.33} \quad (+0.1\sigma)$	$\chi^2_{\text{DR11CMass}}$	2.40	$2.97 \quad (\nu: 0.3) \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	0.965	$0.99^{+0.35}_{-0.35}$	$z_*$	1089.98	$1090.19^{+0.84}_{-0.80} \quad (-0.1\sigma)$	$\chi^2_{\text{DR11LOWZ}}$	0.42	$0.69 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$c_{100}$	0.99655	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$r_*$	144.69	$142.8^{+2.7}_{-3.3} \quad (+0.1\sigma)$	$\chi^2_{\text{prior}}$	3.8	$8.4 \quad (\nu: 6.1) \quad (+0.2\sigma)$
$c_{217}$	0.99750	$0.9975^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$100\theta_*$	1.04121	$1.0409^{+0.0011}_{-0.0011} \quad (+0.1\sigma)$	$\chi^2_{\text{CMB}}$	18550.4	$18567.5 \quad (\nu: 17.9) \quad (+1265.9\sigma)$
$\beta_1^1$	-0.04	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	1059.59	$1060.5^{+1.6}_{-1.5} \quad (-0.1\sigma)$	$\chi^2_{\text{BAO}}$	4.30	$5.2 \quad (\nu: 0.7) \quad (-0.0\sigma)$
$H_0$	67.91	$68.7^{+2.4}_{-2.0} \quad (-0.1\sigma)$	$r_{\text{drag}}$	147.40	$145.4^{+2.8}_{-3.5} \quad (+0.1\sigma)$			

Best-fit  $\chi^2_{\text{eff}} = 18558.49$ ;  $\Delta\chi^2_{\text{eff}} = 7281.84$ ;  $\bar{\chi}^2_{\text{eff}} = 18581.02$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 7282.07$ ;  $R - 1 = 0.00932$   
 $\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 ( $\Delta$  -0.00) MGS: 1.47 ( $\Delta$  0.07) DR11CMass: 2.40 ( $\Delta$  -0.01) DR11LOWZ: 0.42 ( $\Delta$  -0.06) CMB - smica\_g30\_ftl\_full\_pp: 8.94 ( $\Delta$  -0.25) lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.57 ( $\Delta$  -0.18) CamSpec like\_v9.10CMH\_unified: 8046.88

### 12.30 base\_nnu\_meffsterile\_CamSpecHM\_TT\_lowTEB\_lensing\_BAO\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02248^{+0.00048}_{-0.00045} \quad (-0.0\sigma)$	$\Omega_\Lambda$	$0.692^{+0.016}_{-0.016} \quad (-0.0\sigma)$	$k_D$	$0.1420^{+0.0027}_{-0.0023} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1206^{+0.0073}_{-0.0083} \quad (-0.1\sigma)$	$\Omega_m$	$0.308^{+0.016}_{-0.016} \quad (+0.0\sigma)$	$100\theta_D$	$0.1614^{+0.0010}_{-0.00092} \quad (-0.1\sigma)$
$100\theta_{MC}$	$1.04079^{+0.00094}_{-0.00099} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1459^{+0.0071}_{-0.0061} \quad (-0.1\sigma)$	$z_{eq}$	$3305^{+91}_{-97} \quad (-0.0\sigma)$
$\tau$	$0.082^{+0.035}_{-0.034} \quad (+0.1\sigma)$	$\Omega_\nu h^2$	$< 0.00625 \quad (+0.1\sigma)$	$100\theta_{eq}$	$0.833^{+0.021}_{-0.019} \quad (+0.0\sigma)$
$m_{\nu, sterile}^{eff}$	$< 0.527 \quad (+0.1\sigma)$	$\Omega_m h^3$	$< 0.107 \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.07176^{+0.00091}_{-0.00087} \quad (-0.0\sigma)$
$N_{eff}$	$< 3.67 \quad (-0.1\sigma)$	$\sigma_8$	$0.802^{+0.040}_{-0.045} \quad (+0.0\sigma)$	$H(0.57)$	$94.5^{+2.5}_{-2.0} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.099^{+0.072}_{-0.070} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.445^{+0.020}_{-0.022} \quad (+0.0\sigma)$	$D_A(0.57)$	$1364^{+34}_{-40} \quad (+0.1\sigma)$
$n_s$	$0.979^{+0.018}_{-0.017} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.597^{+0.027}_{-0.031} \quad (+0.0\sigma)$	$F_{AP}(0.57)$	$0.6751^{+0.0040}_{-0.0041} \quad (+0.0\sigma)$
$y_{cal}$	$1.0003^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.966^{+0.042}_{-0.048} \quad (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.466^{+0.022}_{-0.025} \quad (+0.0\sigma)$
$A_{100}^{PS}$	$252^{+40}_{-40} \quad (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.449^{+0.053}_{-0.055} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.598^{+0.032}_{-0.035} \quad (-0.0\sigma)$
$A_{143}^{PS}$	$42^{+20}_{-20} \quad (-0.6\sigma)$	$z_{re}$	$10.3^{+3.1}_{-3.0} \quad (+0.1\sigma)$	$Y_P^{BBN}$	$< 0.254 \quad (-0.3\sigma)$
$A_{217}^{PS}$	$96^{+30}_{-30} \quad (+0.0\sigma)$	$10^9 A_s$	$2.22^{+0.16}_{-0.15} \quad (+0.0\sigma)$	$f_{2000}^{143}$	$31^{+6}_{-6} \quad (-0.4\sigma)$
$A_{217}^{CIB}$	$48^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.034}_{-0.032} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$107.8^{+4.3}_{-4.1} \quad (+0.1\sigma)$
$A_{143}^{tSZ}$	$< 6.28 \quad (-0.9\sigma)$	$D_{40}$	$1208^{+28}_{-30} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$33^{+5}_{-4} \quad (-0.4\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.21}_{-0.19}$	$D_{220}$	$5700^{+79}_{-80} \quad (-0.5\sigma)$	$\chi_{lensing}^2$	$9.7 \quad (\nu: 0.8) \quad (-0.0\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{810}$	$2532^{+28}_{-27} \quad (-0.3\sigma)$	$\chi_{lowTEB}^2$	$10494.8 \quad (\nu: 1.2) \quad (-0.1\sigma)$
$A^{kSZ}$	—	$D_{1420}$	$813^{+10}_{-9.9} \quad (-0.0\sigma)$	$\chi_{CamSpec}^2$	$8063.1 \quad (\nu: 17.7)$
$A_{100}^{dust}$	$0.997^{+0.38}_{-0.38}$	$n_{s,0.002}$	$0.979^{+0.018}_{-0.017} \quad (+0.1\sigma)$	$\chi_{H070p6}^2$	$0.38 \quad (\nu: 0.0) \quad (+0.1\sigma)$
$A_{143}^{dust}$	$1.03^{+0.36}_{-0.35}$	$Y_P$	$< 0.253 \quad (-0.3\sigma)$	$\chi_{6DF}^2$	$0.055 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$Age/Gyr$	$13.59^{+0.27}_{-0.33} \quad (+0.1\sigma)$	$\chi_{MGS}^2$	$1.49 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$A_{143 \times 217}^{dust}$	$0.99^{+0.35}_{-0.35}$	$z_*$	$1090.19^{+0.84}_{-0.80} \quad (-0.1\sigma)$	$\chi_{DR11CMass}^2$	$2.93 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$r_*$	$142.7^{+2.8}_{-3.3} \quad (+0.1\sigma)$	$\chi_{DR11LOWZ}^2$	$0.63 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$c_{217}$	$0.9975^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$100\theta_*$	$1.0408^{+0.0011}_{-0.0011} \quad (+0.1\sigma)$	$\chi_{prior}^2$	$8.4 \quad (\nu: 6.1) \quad (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{drag}$	$1060.5^{+1.6}_{-1.5} \quad (-0.1\sigma)$	$\chi_{CMB}^2$	$18567.6 \quad (\nu: 17.8) \quad (+1262.7\sigma)$
$H_0$	$68.9^{+2.3}_{-2.0} \quad (-0.1\sigma)$	$r_{drag}$	$145.3^{+2.9}_{-3.5} \quad (+0.1\sigma)$	$\chi_{BAO}^2$	$5.1 \quad (\nu: 0.6) \quad (-0.0\sigma)$

$$\bar{\chi}_{eff}^2 = 18581.48; \Delta\chi_{eff}^2 = 7282.14; R - 1 = 0.00917$$

### 12.31 base\_nnu\_meffsterile\_CamSpecHM\_TT\_lowTEB\_lensing\_BAO\_post\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02250^{+0.00048}_{-0.00046} \quad (-0.0\sigma)$	$\Omega_m$	$0.307^{+0.016}_{-0.016} \quad (-0.0\sigma)$	$z_{\text{eq}}$	$3303^{+92}_{-95} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1206^{+0.0074}_{-0.0085} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1459^{+0.0071}_{-0.0062} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.833^{+0.020}_{-0.019} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04077^{+0.00095}_{-0.00099} \quad (+0.1\sigma)$	$\Omega_\nu h^2$	$< 0.00621 \quad (+0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07181^{+0.00089}_{-0.00085} \quad (+0.0\sigma)$
$\tau$	$0.083^{+0.035}_{-0.032} \quad (+0.1\sigma)$	$\Omega_m h^3$	$< 0.108 \quad (-0.1\sigma)$	$H(0.57)$	$94.6^{+2.5}_{-2.0} \quad (-0.1\sigma)$
$m_{\nu, \text{sterile}}^{\text{eff}}$	$< 0.524 \quad (+0.1\sigma)$	$\sigma_8$	$0.802^{+0.040}_{-0.045} \quad (+0.0\sigma)$	$D_A(0.57)$	$1363^{+34}_{-40} \quad (+0.1\sigma)$
$N_{\text{eff}}$	$< 3.68 \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.444^{+0.021}_{-0.022} \quad (-0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.6748^{+0.0039}_{-0.0040} \quad (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.100^{+0.072}_{-0.070} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.597^{+0.027}_{-0.031} \quad (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.466^{+0.022}_{-0.025} \quad (-0.0\sigma)$
$n_s$	$0.980^{+0.018}_{-0.017} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$0.966^{+0.042}_{-0.048} \quad (+0.0\sigma)$	$\sigma_8(0.57)$	$0.598^{+0.032}_{-0.036} \quad (+0.0\sigma)$
$y_{\text{cal}}$	$1.0002^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.449^{+0.052}_{-0.054} \quad (-0.0\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$< 0.255 \quad (-0.3\sigma)$
$A_{100}^{\text{PS}}$	$252^{+40}_{-50} \quad (-0.5\sigma)$	$z_{\text{re}}$	$10.4^{+3.0}_{-3.1} \quad (+0.1\sigma)$	$f_{2000}^{143}$	$31^{+6}_{-6} \quad (-0.4\sigma)$
$A_{143}^{\text{PS}}$	$42^{+20}_{-20} \quad (-0.6\sigma)$	$10^9 A_s$	$2.22^{+0.16}_{-0.16} \quad (+0.0\sigma)$	$f_{2000}^{217}$	$107.8^{+4.3}_{-4.1} \quad (+0.1\sigma)$
$A_{217}^{\text{PS}}$	$96^{+30}_{-30} \quad (+0.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.034}_{-0.032} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$33^{+5}_{-5} \quad (-0.4\sigma)$
$A_{217}^{\text{CIB}}$	$48^{+10}_{-10} \quad (-2.7\sigma)$	$D_{40}$	$1208^{+29}_{-29} \quad (-0.4\sigma)$	$\chi_{\text{lensing}}^2$	$9.7 \quad (\nu: 0.8) \quad (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.29 \quad (-0.9\sigma)$	$D_{220}$	$5701^{+80}_{-80} \quad (-0.5\sigma)$	$\chi_{\text{lowTEB}}^2$	$10494.8 \quad (\nu: 1.3) \quad (-0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.21}_{-0.19}$	$D_{810}$	$2532^{+28}_{-27} \quad (-0.3\sigma)$	$\chi_{\text{CamSpec}}^2$	$8063.2 \quad (\nu: 17.8)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{1420}$	$813^{+10}_{-9.9} \quad (-0.0\sigma)$	$\chi_{\text{H070p6}}^2$	$0.36 \quad (\nu: 0.0) \quad (+0.1\sigma)$
$A^{\text{kSZ}}$	—	$n_{\text{s}, 0.002}$	$0.980^{+0.018}_{-0.017} \quad (+0.1\sigma)$	$\chi_{\text{JLA}}^2$	$706.68 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{100}^{\text{dust}}$	$0.996^{+0.37}_{-0.37}$	$Y_{\text{P}}$	$< 0.253 \quad (-0.3\sigma)$	$\chi_{6\text{DF}}^2$	$0.049 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.35}$	$\text{Age/Gyr}$	$13.58^{+0.28}_{-0.34} \quad (+0.1\sigma)$	$\chi_{\text{MGS}}^2$	$1.56 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$z_*$	$1090.18^{+0.85}_{-0.82} \quad (-0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.91 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.35}$	$r_*$	$142.6^{+2.9}_{-3.3} \quad (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.57 \quad (\nu: 0.1) \quad (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$100\theta_*$	$1.0408^{+0.0011}_{-0.0012} \quad (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.0) \quad (+0.2\sigma)$
$c_{217}$	$0.9975^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$z_{\text{drag}}$	$1060.6^{+1.6}_{-1.5} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18567.7 \quad (\nu: 17.9) \quad (+1262.3\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$r_{\text{drag}}$	$145.2^{+3.0}_{-3.5} \quad (+0.1\sigma)$	$\chi_{\text{BAO}}^2$	$5.1 \quad (\nu: 0.5) \quad (-0.0\sigma)$
$H_0$	$69.0^{+2.3}_{-2.0} \quad (-0.0\sigma)$	$k_{\text{D}}$	$0.1420^{+0.0028}_{-0.0024} \quad (-0.1\sigma)$		
$\Omega_\Lambda$	$0.693^{+0.016}_{-0.016} \quad (+0.0\sigma)$	$100\theta_{\text{D}}$	$0.1614^{+0.0010}_{-0.00094} \quad (-0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 19288.16; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.21; R - 1 = 0.02688$$

### 12.32 base\_nnu\_meffsterile\_CamSpecHM\_TTTEEE\_lowTEB\_lensing\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022360	$0.02247^{+0.00032}_{-0.00031}$ (+0.4 $\sigma$ )	$H_0$	67.82	$68.0^{+1.4}_{-1.2}$ (+0.1 $\sigma$ )	$k_D$	0.14050	$0.1413^{+0.0015}_{-0.0012}$ (-0.1 $\sigma$ )
$\Omega_c h^2$	0.1186	$0.1181^{+0.0063}_{-0.0073}$ (-0.3 $\sigma$ )	$\Omega_\Lambda$	0.6919	$0.689^{+0.013}_{-0.014}$ (+0.3 $\sigma$ )	$100\theta_D$	0.16081	$0.16091^{+0.00056}_{-0.00050}$ (-0.6 $\sigma$ )
$100\theta_{MC}$	1.04091	$1.04081^{+0.00059}_{-0.00064}$ (+0.2 $\sigma$ )	$\Omega_m$	0.3081	$0.311^{+0.014}_{-0.013}$ (-0.3 $\sigma$ )	$z_{eq}$	3365	$3312^{+99}_{-140}$ (-0.3 $\sigma$ )
$\tau$	0.0673	$0.073^{+0.027}_{-0.026}$ (+0.1 $\sigma$ )	$\Omega_m h^2$	0.14171	$0.1437^{+0.0042}_{-0.0036}$ (-0.3 $\sigma$ )	$100\theta_{eq}$	0.8200	$0.832^{+0.030}_{-0.021}$ (+0.3 $\sigma$ )
$m_{\nu, sterile}^{eff}$	0.014	< 0.700 (+0.2 $\sigma$ )	$\Omega_\nu h^2$	0.00080	< 0.00809 (+0.2 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07176	$0.07159^{+0.00076}_{-0.00077}$ (+0.3 $\sigma$ )
$N_{eff}$	3.050	< 3.33 (-0.2 $\sigma$ )	$\Omega_m h^3$	0.09611	$0.0977^{+0.0035}_{-0.0025}$ (-0.2 $\sigma$ )	$H(0.57)$	93.11	$93.6^{+1.2}_{-0.93}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.063	$3.077^{+0.054}_{-0.051}$ (-0.1 $\sigma$ )	$\sigma_8$	0.8128	$0.792^{+0.040}_{-0.045}$ (-0.2 $\sigma$ )	$D_A(0.57)$	1384.7	$1379^{+19}_{-22}$ (-0.0 $\sigma$ )
$n_s$	0.9682	$0.971^{+0.012}_{-0.011}$ (+0.2 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4511	$0.442^{+0.021}_{-0.023}$ (-0.3 $\sigma$ )	$F_{AP}(0.57)$	0.67516	$0.6758^{+0.0036}_{-0.0034}$ (-0.3 $\sigma$ )
$y_{cal}$	0.99996	$1.0002^{+0.0049}_{-0.0049}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6055	$0.592^{+0.028}_{-0.031}$ (-0.3 $\sigma$ )	$f\sigma_8(0.57)$	0.4717	$0.461^{+0.023}_{-0.025}$ (-0.3 $\sigma$ )
$A_{100}^{PS}$	249.9	$248^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	0.9869	$0.961^{+0.045}_{-0.051}$ (-0.2 $\sigma$ )	$\sigma_8(0.57)$	0.6055	$0.590^{+0.032}_{-0.034}$ (-0.2 $\sigma$ )
$A_{143}^{PS}$	34.9	$40^{+20}_{-10}$ (-0.6 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.447	$2.451^{+0.049}_{-0.052}$ (-0.3 $\sigma$ )	$Y_P^{BBN}$	0.24636	< 0.250 (-0.5 $\sigma$ )
$A_{217}^{PS}$	94.7	$98^{+30}_{-30}$ (+0.1 $\sigma$ )	$z_{re}$	8.94	$9.4^{+2.4}_{-2.6}$ (+0.1 $\sigma$ )	$f_{2000}^{143}$	29.4	$30^{+5}_{-5}$ (-0.5 $\sigma$ )
$A_{217}^{CIB}$	47.3	$46^{+10}_{-10}$ (-2.8 $\sigma$ )	$10^9 A_s$	2.139	$2.17^{+0.12}_{-0.12}$ (-0.1 $\sigma$ )	$f_{2000}^{217}$	106.62	$106.8^{+3.7}_{-3.7}$ (+0.0 $\sigma$ )
$A_{143}^{tSZ}$	2.99	< 6.54 (-1.0 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.8692	$1.875^{+0.025}_{-0.025}$ (-0.6 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.76	$32^{+4}_{-4}$ (-0.6 $\sigma$ )
$r_{143 \times 217}^{PS}$	0.397	$0.51^{+0.22}_{-0.21}$	$D_{40}$	1222.1	$1218^{+25}_{-24}$ (-0.5 $\sigma$ )	$\chi_{lensing}^2$	9.12	$9.9 (\nu: 0.9)$ (-0.2 $\sigma$ )
$\xi^{tSZ \times CIB}$	0.00	—	$D_{220}$	5707	$5710^{+77}_{-75}$ (-0.4 $\sigma$ )	$\chi_{lowTEB}^2$	10494.78	$10495.0 (\nu: 0.7)$ (-0.4 $\sigma$ )
$A^{kSZ}$	5.8	—	$D_{810}$	2527.3	$2530^{+27}_{-26}$ (-0.4 $\sigma$ )	$\chi_{CamSpec}^2$	12937.4	$12955.6 (\nu: 19.7)$
$A_{100}^{dust}$	0.996	$0.99^{+0.37}_{-0.38}$	$D_{1420}$	813.7	$814.1^{+9.2}_{-9.1}$ (-0.0 $\sigma$ )	$\chi_{6DF}^2$	0.010	$0.065 (\nu: 0.0)$ (-0.2 $\sigma$ )
$A_{143}^{dust}$	1.044	$1.03^{+0.36}_{-0.36}$	$n_{s,0.002}$	0.9682	$0.971^{+0.012}_{-0.011}$ (+0.2 $\sigma$ )	$\chi_{MGS}^2$	1.41	$1.27 (\nu: 0.1)$ (+0.3 $\sigma$ )
$A_{217}^{dust}$	1.219	$1.21^{+0.23}_{-0.23}$	$Y_P$	0.24503	< 0.249 (-0.5 $\sigma$ )	$\chi_{DR11CMass}^2$	2.42	$2.92 (\nu: 0.2)$ (-0.2 $\sigma$ )
$A_{143 \times 217}^{dust}$	0.962	$0.99^{+0.34}_{-0.35}$	Age/Gyr	13.791	$13.72^{+0.12}_{-0.17}$ (+0.1 $\sigma$ )	$\chi_{DR11LOWZ}^2$	0.48	$0.82 (\nu: 0.2)$ (-0.2 $\sigma$ )
$c_{100}$	0.99658	$0.9968^{+0.0019}_{-0.0019}$ (-1.8 $\sigma$ )	$z_*$	1089.80	$1089.91^{+0.55}_{-0.56}$ (-0.6 $\sigma$ )	$\chi_{prior}^2$	4.0	$9.1 (\nu: 6.4)$ (-1.9 $\sigma$ )
$c_{217}$	0.99735	$0.9972^{+0.0034}_{-0.0034}$ (+0.8 $\sigma$ )	$r_*$	144.77	$143.9^{+1.4}_{-1.8}$ (+0.2 $\sigma$ )	$\chi_{CMB}^2$	23441.3	$23460.5 (\nu: 19.6)$ (+1528.7 $\sigma$ )
$c_{TE}$	1.0049	$1.0053^{+0.0086}_{-0.0085}$	$100\theta_*$	1.04111	$1.04095^{+0.00061}_{-0.00071}$ (+0.2 $\sigma$ )	$\chi_{BAO}^2$	4.32	$5.07 (\nu: 0.5)$ (-0.2 $\sigma$ )
$c_{EE}$	1.0013	$1.0021^{+0.0085}_{-0.0084}$	$z_{drag}$	1059.82	$1060.25^{+0.94}_{-0.87}$ (+0.1 $\sigma$ )			
$\beta_1^1$	0.01	$-0.1^{+2.0}_{-1.9}$	$r_{drag}$	147.44	$146.5^{+1.5}_{-1.9}$ (+0.2 $\sigma$ )			

Best-fit  $\chi_{eff}^2 = 23449.57$ ;  $\Delta\chi_{eff}^2 = 10498.09$ ;  $\bar{\chi}_{eff}^2 = 23474.59$ ;  $\Delta\bar{\chi}_{eff}^2 = 10488.49$ ;  $R - 1 = 0.01373$   
 $\chi_{eff}^2$ : BAO - 6DF: 0.01 ( $\Delta$  -0.00) MGS: 1.41 ( $\Delta$  0.06) DR11CMass: 2.42 ( $\Delta$  -0.01) DR11LOWZ: 0.48 ( $\Delta$  -0.06) CMB - smica\_g30\_ftl\_full\_pp: 9.12 ( $\Delta$  -0.53)  
lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.78 ( $\Delta$  -0.46) CamSpec like\_v9.10CMH\_unified: 12937.37

### 12.33 base\_nnu\_meffsterile\_CamSpecHM\_TTTEEE\_lowTEB\_lensing\_BAO\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02248^{+0.00032}_{-0.00031} \quad (+0.3\sigma)$	$H_0$	$68.1^{+1.4}_{-1.2} \quad (+0.1\sigma)$	$k_D$	$0.1413^{+0.0016}_{-0.0013} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1182^{+0.0065}_{-0.0073} \quad (-0.4\sigma)$	$\Omega_\Lambda$	$0.690^{+0.014}_{-0.014} \quad (+0.3\sigma)$	$100\theta_D$	$0.16092^{+0.00058}_{-0.00052} \quad (-0.6\sigma)$
$100\theta_{MC}$	$1.04081^{+0.00059}_{-0.00064} \quad (+0.2\sigma)$	$\Omega_m$	$0.310^{+0.014}_{-0.014} \quad (-0.3\sigma)$	$z_{eq}$	$3311^{+97}_{-130} \quad (-0.3\sigma)$
$\tau$	$0.073^{+0.027}_{-0.026} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1437^{+0.0043}_{-0.0037} \quad (-0.3\sigma)$	$100\theta_{eq}$	$0.832^{+0.029}_{-0.021} \quad (+0.3\sigma)$
$m_{\nu, sterile}^{eff}$	$< 0.679 \quad (+0.2\sigma)$	$\Omega_\nu h^2$	$< 0.00786 \quad (+0.2\sigma)$	$r_{drag}/D_V(0.57)$	$0.07163^{+0.00074}_{-0.00077} \quad (+0.3\sigma)$
$N_{eff}$	$< 3.35 \quad (-0.2\sigma)$	$\Omega_m h^3$	$0.0979^{+0.0037}_{-0.0026} \quad (-0.2\sigma)$	$H(0.57)$	$93.6^{+1.3}_{-0.96} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.078^{+0.054}_{-0.051} \quad (-0.1\sigma)$	$\sigma_8$	$0.794^{+0.040}_{-0.044} \quad (-0.2\sigma)$	$D_A(0.57)$	$1378^{+19}_{-23} \quad (-0.0\sigma)$
$n_s$	$0.972^{+0.012}_{-0.011} \quad (+0.2\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.442^{+0.021}_{-0.023} \quad (-0.4\sigma)$	$F_{AP}(0.57)$	$0.6756^{+0.0036}_{-0.0034} \quad (-0.3\sigma)$
$y_{cal}$	$1.0002^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.592^{+0.028}_{-0.031} \quad (-0.3\sigma)$	$f\sigma_8(0.57)$	$0.461^{+0.022}_{-0.025} \quad (-0.3\sigma)$
$A_{100}^{PS}$	$247^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.962^{+0.045}_{-0.050} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.591^{+0.031}_{-0.034} \quad (-0.2\sigma)$
$A_{143}^{PS}$	$40^{+10}_{-10} \quad (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.451^{+0.049}_{-0.052} \quad (-0.3\sigma)$	$Y_P^{BBN}$	$< 0.250 \quad (-0.5\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$z_{re}$	$9.5^{+2.4}_{-2.5} \quad (+0.0\sigma)$	$f_{2000}^{143}$	$30^{+5}_{-5} \quad (-0.5\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.17^{+0.12}_{-0.12} \quad (-0.1\sigma)$	$f_{2000}^{217}$	$106.8^{+3.8}_{-3.7} \quad (+0.0\sigma)$
$A_{143}^{tSZ}$	$< 6.52 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.025}_{-0.025} \quad (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.6\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.22}_{-0.21}$	$D_{40}$	$1218^{+25}_{-24} \quad (-0.5\sigma)$	$\chi_{lensing}^2$	$9.9 \quad (\nu: 0.9) \quad (-0.2\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{220}$	$5711^{+77}_{-73} \quad (-0.5\sigma)$	$\chi_{lowTEB}^2$	$10495.0 \quad (\nu: 0.7) \quad (-0.4\sigma)$
$A^{kSZ}$	—	$D_{810}$	$2530^{+27}_{-26} \quad (-0.4\sigma)$	$\chi_{CamSpec}^2$	$12955.7 \quad (\nu: 20.0)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$D_{1420}$	$814.2^{+9.3}_{-9.1} \quad (-0.0\sigma)$	$\chi_{H070p6}^2$	$0.60 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{143}^{dust}$	$1.03^{+0.36}_{-0.35}$	$n_{s,0.002}$	$0.972^{+0.012}_{-0.011} \quad (+0.2\sigma)$	$\chi_{6DF}^2$	$0.058 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.22}$	$Y_P$	$< 0.249 \quad (-0.5\sigma)$	$\chi_{MGS}^2$	$1.32 \quad (\nu: 0.1) \quad (+0.3\sigma)$
$A_{143 \times 217}^{dust}$	$0.99^{+0.35}_{-0.35}$	Age/Gyr	$13.71^{+0.13}_{-0.18} \quad (+0.1\sigma)$	$\chi_{DR11CMass}^2$	$2.87 \quad (\nu: 0.2) \quad (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.89^{+0.55}_{-0.56} \quad (-0.6\sigma)$	$\chi_{DR11LOWZ}^2$	$0.76 \quad (\nu: 0.2) \quad (-0.2\sigma)$
$c_{217}$	$0.9972^{+0.0034}_{-0.0034} \quad (+0.8\sigma)$	$r_*$	$143.8^{+1.5}_{-1.9} \quad (+0.2\sigma)$	$\chi_{prior}^2$	$9.1 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{TE}$	$1.0053^{+0.0086}_{-0.0084}$	$100\theta_*$	$1.04095^{+0.00062}_{-0.00073} \quad (+0.2\sigma)$	$\chi_{CMB}^2$	$23460.5 \quad (\nu: 19.8) \quad (+1521.1\sigma)$
$c_{EE}$	$1.0022^{+0.0085}_{-0.0085}$	$z_{drag}$	$1060.28^{+0.96}_{-0.88} \quad (+0.1\sigma)$	$\chi_{BAO}^2$	$5.01 \quad (\nu: 0.4) \quad (-0.1\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$r_{drag}$	$146.4^{+1.5}_{-2.0} \quad (+0.2\sigma)$		

$$\bar{\chi}_{eff}^2 = 23475.24; \Delta\bar{\chi}_{eff}^2 = 10488.49; R - 1 = 0.01817$$



### 12.34 base\_nnu\_meffsterile\_CamSpecHM\_TTTEEE\_lowTEB\_lensing\_BAO\_post\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02249^{+0.00032}_{-0.00031} \quad (+0.3\sigma)$	$H_0$	$68.1^{+1.4}_{-1.2} \quad (+0.1\sigma)$	$k_D$	$0.1413^{+0.0016}_{-0.0013} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1181^{+0.0065}_{-0.0073} \quad (-0.4\sigma)$	$\Omega_\Lambda$	$0.691^{+0.013}_{-0.014} \quad (+0.3\sigma)$	$100\theta_D$	$0.16092^{+0.00058}_{-0.00052} \quad (-0.6\sigma)$
$100\theta_{MC}$	$1.04082^{+0.00059}_{-0.00064} \quad (+0.2\sigma)$	$\Omega_m$	$0.309^{+0.014}_{-0.013} \quad (-0.3\sigma)$	$z_{eq}$	$3310^{+97}_{-130} \quad (-0.3\sigma)$
$\tau$	$0.074^{+0.027}_{-0.026} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1436^{+0.0043}_{-0.0037} \quad (-0.3\sigma)$	$100\theta_{eq}$	$0.832^{+0.029}_{-0.021} \quad (+0.3\sigma)$
$m_{\nu, sterile}^{eff}$	$< 0.679 \quad (+0.2\sigma)$	$\Omega_\nu h^2$	$< 0.00786 \quad (+0.2\sigma)$	$r_{drag}/D_V(0.57)$	$0.07167^{+0.00073}_{-0.00076} \quad (+0.3\sigma)$
$N_{eff}$	$< 3.35 \quad (-0.2\sigma)$	$\Omega_m h^3$	$0.0979^{+0.0037}_{-0.0026} \quad (-0.2\sigma)$	$H(0.57)$	$93.6^{+1.3}_{-0.97} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.079^{+0.054}_{-0.051} \quad (-0.1\sigma)$	$\sigma_8$	$0.794^{+0.040}_{-0.044} \quad (-0.2\sigma)$	$D_A(0.57)$	$1378^{+19}_{-23} \quad (+0.0\sigma)$
$n_s$	$0.972^{+0.012}_{-0.011} \quad (+0.2\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.442^{+0.021}_{-0.023} \quad (-0.4\sigma)$	$F_{AP}(0.57)$	$0.6755^{+0.0034}_{-0.0033} \quad (-0.3\sigma)$
$y_{cal}$	$1.0002^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.592^{+0.028}_{-0.031} \quad (-0.3\sigma)$	$f\sigma_8(0.57)$	$0.462^{+0.022}_{-0.025} \quad (-0.3\sigma)$
$A_{100}^{PS}$	$247^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.962^{+0.044}_{-0.050} \quad (-0.3\sigma)$	$\sigma_8(0.57)$	$0.592^{+0.031}_{-0.034} \quad (-0.2\sigma)$
$A_{143}^{PS}$	$40^{+10}_{-10} \quad (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.450^{+0.049}_{-0.052} \quad (-0.3\sigma)$	$Y_P^{BBN}$	$< 0.250 \quad (-0.5\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$z_{re}$	$9.5^{+2.4}_{-2.5} \quad (+0.0\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-5} \quad (-0.5\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.9\sigma)$	$10^9 A_s$	$2.17^{+0.12}_{-0.12} \quad (-0.1\sigma)$	$f_{2000}^{217}$	$106.7^{+3.8}_{-3.7} \quad (+0.0\sigma)$
$A_{143}^{tSZ}$	$< 6.52 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.026}_{-0.025} \quad (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.6\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.22}_{-0.21}$	$D_{40}$	$1218^{+25}_{-24} \quad (-0.5\sigma)$	$\chi_{lensing}^2$	$9.9 \quad (\nu: 0.9) \quad (-0.2\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{220}$	$5711^{+77}_{-73} \quad (-0.5\sigma)$	$\chi_{lowTEB}^2$	$10495.0 \quad (\nu: 0.7) \quad (-0.4\sigma)$
$A^{kSZ}$	—	$D_{810}$	$2530^{+27}_{-26} \quad (-0.4\sigma)$	$\chi_{CamSpec}^2$	$12955.8 \quad (\nu: 20.0)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$D_{1420}$	$814.2^{+9.3}_{-9.0} \quad (-0.0\sigma)$	$\chi_{H070p6}^2$	$0.58 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{143}^{dust}$	$1.03^{+0.36}_{-0.35}$	$n_{s,0.002}$	$0.972^{+0.012}_{-0.011} \quad (+0.2\sigma)$	$\chi_{JLA}^2$	$706.73 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.22}$	$Y_P$	$< 0.249 \quad (-0.5\sigma)$	$\chi_{6DF}^2$	$0.052 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{143 \times 217}^{dust}$	$0.99^{+0.35}_{-0.35}$	Age/Gyr	$13.71^{+0.13}_{-0.18} \quad (+0.1\sigma)$	$\chi_{MGS}^2$	$1.36 \quad (\nu: 0.1) \quad (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.88^{+0.55}_{-0.55} \quad (-0.6\sigma)$	$\chi_{DR11CMASS}^2$	$2.83 \quad (\nu: 0.2) \quad (-0.1\sigma)$
$c_{217}$	$0.9972^{+0.0034}_{-0.0034} \quad (+0.8\sigma)$	$r_*$	$143.8^{+1.5}_{-1.9} \quad (+0.2\sigma)$	$\chi_{DR11LOWZ}^2$	$0.71 \quad (\nu: 0.1) \quad (-0.2\sigma)$
$c_{TE}$	$1.0053^{+0.0086}_{-0.0084}$	$100\theta_*$	$1.04095^{+0.00062}_{-0.00074} \quad (+0.2\sigma)$	$\chi_{prior}^2$	$9.1 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{EE}$	$1.0022^{+0.0085}_{-0.0085}$	$z_{drag}$	$1060.28^{+0.96}_{-0.88} \quad (+0.1\sigma)$	$\chi_{CMB}^2$	$23460.6 \quad (\nu: 19.8) \quad (+1519.5\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$r_{drag}$	$146.5^{+1.5}_{-2.0} \quad (+0.2\sigma)$	$\chi_{BAO}^2$	$4.95 \quad (\nu: 0.3) \quad (-0.1\sigma)$

$$\bar{\chi}_{eff}^2 = 24181.92; \Delta\bar{\chi}_{eff}^2 = 10488.48; R - 1 = 0.01936$$

### 12.35 base\_nnu\_meffsterile\_WOnlyHeymans\_BAO\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02221	$0.0223^{+0.0017}_{-0.0017}$	$10^9 A_s e^{-2\tau}$	1.28	$1.75^{+1.1}_{-0.82}$	$z_{\text{eq}}$	3398	$3202^{+300}_{-360}$
$\Omega_c h^2$	0.200	$0.196^{+0.058}_{-0.067}$	$D_{40}$	820	$1121^{+700}_{-500}$	$k_{\text{eq}}$	0.01296	$0.0125^{+0.0020}_{-0.0022}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.10	$< 2.20$	$D_{220}$	3560	$5068^{+4000}_{-3000}$	$100\theta_{\text{eq}}$	0.817	$0.857^{+0.079}_{-0.061}$
$N_{\text{eff}}$	7.24	$> 4.43$	$D_{810}$	1495	$2050^{+1000}_{-1000}$	$100\theta_{\text{s,eq}}$	0.4513	$0.472^{+0.041}_{-0.032}$
$\ln(10^{10} A_s)$	2.69	$2.96^{+0.56}_{-0.48}$	$D_{1420}$	430	$584^{+400}_{-300}$	$r_{\text{drag}}/D_V(0.57)$	0.07174	$0.0718^{+0.0010}_{-0.0010}$
$n_s$	0.9609	$0.964^{+0.039}_{-0.040}$	$D_{2000}$	107	$145^{+100}_{-80}$	$H(0.57)$	117.1	$118^{+10}_{-20}$
$H_0$	85.3	$86^{+10}_{-10}$	$n_{\text{s},0.002}$	0.9609	$0.964^{+0.039}_{-0.040}$	$D_A(0.57)$	1101	$1100^{+200}_{-100}$
$\Omega_\Lambda$	0.6921	$0.692^{+0.018}_{-0.019}$	$Y_P$	0.2849	$0.285^{+0.012}_{-0.023}$	$F_{\text{AP}}(0.57)$	0.67511	$0.6752^{+0.0049}_{-0.0047}$
$\Omega_m$	0.3079	$0.308^{+0.019}_{-0.018}$	$Y_P^{\text{BBN}}$	0.2863	$0.286^{+0.012}_{-0.023}$	$f\sigma_8(0.57)$	0.4344	$0.429^{+0.033}_{-0.035}$
$\Omega_m h^2$	0.224	$0.229^{+0.054}_{-0.069}$	$10^5 D/H$	4.06	$4.2^{+1.1}_{-1.3}$	$\sigma_8(0.57)$	0.5569	$0.546^{+0.047}_{-0.049}$
$\Omega_\nu h^2$	0.0018	$< 0.0240$	Age/Gyr	10.97	$11.0^{+1.9}_{-1.3}$	$\chi_{6\text{DF}}^2$	0.011	$0.069 (\nu: 0.0)$
$\Omega_m h^3$	0.191	$0.198^{+0.069}_{-0.085}$	$z_*$	1100.0	$1099.8^{+6.5}_{-8.1}$	$\chi_{\text{MGS}}^2$	1.41	$1.51 (\nu: 0.2)$
$\sigma_8$	0.747	$0.730^{+0.061}_{-0.064}$	$r_*$	115.0	$115^{+20}_{-10}$	$\chi_{\text{DR11CMass}}^2$	2.43	$3.08 (\nu: 0.5)$
$\sigma_8 \Omega_m^{0.5}$	0.4145	$0.405^{+0.031}_{-0.033}$	$100\theta_*$	1.03876	$1.0389^{+0.0015}_{-0.0010}$	$\chi_{\text{DR11LOWZ}}^2$	0.50	$0.68 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	0.5565	$0.543^{+0.043}_{-0.046}$	$D_A/\text{Gpc}$	11.07	$11.1^{+1.9}_{-1.3}$	$\chi_{\text{CFHTLENS}}^2$	95.94	$97.9 (\nu: 1.8)$
$\sigma_8/h^{0.5}$	0.809	$0.789^{+0.096}_{-0.087}$	$z_{\text{drag}}$	1067.5	$1067.8^{+6.2}_{-7.2}$	$\chi_{\text{prior}}^2$	0.01	$2.0 (\nu: 2.1)$
$\langle d^2 \rangle^{1/2}$	2.072	$2.27^{+0.52}_{-0.43}$	$r_{\text{drag}}$	117.2	$117^{+20}_{-10}$	$\chi_{\text{BAO}}^2$	4.35	$5.3 (\nu: 1.0)$
$z_{\text{re}}$	11.13	$11.2^{+1.3}_{-1.6}$	$k_D$	0.1647	$0.165^{+0.015}_{-0.019}$			
$10^9 A_s$	1.48	$2.01^{+1.3}_{-0.94}$	$100\theta_D$	0.1724	$0.1731^{+0.0071}_{-0.0092}$			

Best-fit  $\chi_{\text{eff}}^2 = 100.30$ ;  $\bar{\chi}_{\text{eff}}^2 = 105.30$ ;  $R - 1 = 0.00777$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.43 DR11LOWZ: 0.50 WL - CFHTLENS\_6bin\_conservative: 95.94

### 12.36 base\_nnu\_meffsterile\_WLonlyHeymans\_H070p6\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02226	$0.0223^{+0.0018}_{-0.0018}$	$z_{\text{re}}$	10.17	$11.6^{+1.8}_{-2.0}$	$z_{\text{drag}}$	1063.5	$1069.1^{+7.6}_{-8.4}$
$\Omega_c h^2$	0.159	$0.227^{+0.089}_{-0.096}$	$10^9 A_s$	1.29	$1.14^{+0.94}_{-0.61}$	$r_{\text{drag}}$	132.0	$115^{+20}_{-20}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.03	—	$10^9 A_s e^{-2\tau}$	1.13	$0.99^{+0.82}_{-0.53}$	$k_D$	0.1526	$0.170^{+0.021}_{-0.024}$
$N_{\text{eff}}$	4.55	$> 4.30$	$D_{40}$	718	$605^{+600}_{-400}$	$100\theta_D$	0.1652	$0.1711^{+0.0074}_{-0.0081}$
$\ln(10^{10} A_s)$	2.56	$< 3.03$	$D_{220}$	3177	$2659^{+3000}_{-2000}$	$z_{\text{eq}}$	3604	$3848^{+600}_{-700}$
$n_s$	0.9611	$0.963^{+0.040}_{-0.039}$	$D_{810}$	1417	$1171^{+1000}_{-700}$	$k_{\text{eq}}$	0.01206	$0.0146^{+0.0035}_{-0.0041}$
$H_0$	71.0	$70.9^{+6.3}_{-6.2}$	$D_{1420}$	439	$348^{+400}_{-200}$	$100\theta_{\text{eq}}$	0.780	$0.751^{+0.10}_{-0.078}$
$\Omega_\Lambda$	0.638	$0.47^{+0.23}_{-0.22}$	$D_{2000}$	117	$88^{+100}_{-60}$	$100\theta_{s, \text{eq}}$	0.4320	$0.417^{+0.055}_{-0.042}$
$\Omega_m$	0.362	$0.53^{+0.22}_{-0.23}$	$n_{s, 0.002}$	0.9611	$0.963^{+0.040}_{-0.039}$	$r_{\text{drag}}/D_V(0.57)$	0.0691	$0.0642^{+0.0069}_{-0.0056}$
$\Omega_m h^2$	0.182	$0.26^{+0.10}_{-0.11}$	$Y_P$	0.2635	$0.281^{+0.014}_{-0.022}$	$H(0.57)$	101.3	$112^{+10}_{-10}$
$\Omega_\nu h^2$	0.0010	$< 0.0294$	$Y_P^{\text{BBN}}$	0.2649	$0.283^{+0.014}_{-0.022}$	$D_A(0.57)$	1297	$1234^{+120}_{-110}$
$\Omega_m h^3$	0.129	$0.187^{+0.074}_{-0.076}$	$10^5 D/H$	3.13	$4.0^{+1.1}_{-1.2}$	$F_{\text{AP}}(0.57)$	0.6883	$0.722^{+0.043}_{-0.046}$
$\sigma_8$	0.685	$0.56^{+0.16}_{-0.13}$	Age/Gyr	12.59	$11.4^{+1.6}_{-1.4}$	$f\sigma_8(0.57)$	0.408	$0.349^{+0.079}_{-0.069}$
$\sigma_8 \Omega_m^{0.5}$	0.4119	$0.398^{+0.030}_{-0.032}$	$z_*$	1094.7	$1101.6^{+8.6}_{-9.6}$	$\sigma_8(0.57)$	0.500	$0.39^{+0.14}_{-0.11}$
$\sigma_8 \Omega_m^{0.25}$	0.531	$0.471^{+0.078}_{-0.069}$	$r_*$	129.6	$113^{+20}_{-20}$	$\chi^2_{\text{H070p6}}$	0.03	$0.9 (\nu: 0.9)$
$\sigma_8/h^{0.5}$	0.813	$0.66^{+0.18}_{-0.15}$	$100\theta_*$	1.04007	$1.0393^{+0.0012}_{-0.00085}$	$\chi^2_{\text{CFHTLENS}}$	96.12	$97.8 (\nu: 1.9)$
$\langle d^2 \rangle^{1/2}$	1.998	$1.87^{+0.52}_{-0.36}$	$D_A/\text{Gpc}$	12.46	$10.9^{+2.1}_{-1.7}$	$\chi^2_{\text{prior}}$	0.00	$2.0 (\nu: 2.1)$

Best-fit  $\chi^2_{\text{eff}} = 96.15$ ;  $\bar{\chi}^2_{\text{eff}} = 100.74$ ;  $R - 1 = 0.02115$

$\chi^2_{\text{eff}}$ : Hubble - H070p6: 0.03 WL - CFHTLENS\_6bin\_conservative: 96.12

### 12.37 base\_nnu\_meffsterile\_WLonlyHeymans\_H070p6\_BAO\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02231	$0.0221^{+0.0017}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	1.49	$1.85^{+0.82}_{-0.69}$	$z_{\text{eq}}$	3376	$3208^{+250}_{-280}$
$\Omega_c h^2$	0.1326	$0.135^{+0.026}_{-0.025}$	$D_{40}$	974	$1213^{+500}_{-500}$	$k_{\text{eq}}$	0.01079	$0.0106^{+0.0011}_{-0.0010}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.01	$< 1.29$	$D_{220}$	4449	$5642^{+3000}_{-2000}$	$100\theta_{\text{eq}}$	0.818	$0.853^{+0.062}_{-0.050}$
$N_{\text{eff}}$	3.77	$< 5.59$	$D_{810}$	1948	$2397^{+1000}_{-900}$	$100\theta_{\text{s,eq}}$	0.4521	$0.470^{+0.032}_{-0.026}$
$\ln(10^{10} A_s)$	2.839	$3.04^{+0.41}_{-0.39}$	$D_{1420}$	613	$739^{+300}_{-300}$	$r_{\text{drag}}/D_V(0.57)$	0.07175	$0.0717^{+0.0010}_{-0.0010}$
$n_s$	0.9631	$0.963^{+0.038}_{-0.038}$	$D_{2000}$	168	$199^{+90}_{-80}$	$H(0.57)$	97.6	$99.7^{+7.4}_{-7.1}$
$H_0$	71.1	$72.5^{+5.5}_{-5.2}$	$n_{\text{s},0.002}$	0.9631	$0.963^{+0.038}_{-0.038}$	$D_A(0.57)$	1321	$1296^{+94}_{-94}$
$\Omega_\Lambda$	0.6919	$0.690^{+0.018}_{-0.020}$	$Y_P$	0.2546	$0.261^{+0.014}_{-0.015}$	$F_{\text{AP}}(0.57)$	0.67515	$0.6756^{+0.0050}_{-0.0047}$
$\Omega_m$	0.3081	$0.310^{+0.020}_{-0.018}$	$Y_P^{\text{BBN}}$	0.2560	$0.262^{+0.014}_{-0.015}$	$f\sigma_8(0.57)$	0.4339	$0.428^{+0.033}_{-0.035}$
$\Omega_m h^2$	0.1556	$0.163^{+0.026}_{-0.024}$	$10^5 D/H$	2.85	$3.09^{+0.70}_{-0.66}$	$\sigma_8(0.57)$	0.5569	$0.545^{+0.046}_{-0.047}$
$\Omega_\nu h^2$	0.0007	$< 0.0144$	Age/Gyr	13.16	$12.89^{+0.94}_{-0.93}$	$\chi_{\text{H070p6}}^2$	0.02	1.1 ( $\nu$ : 1.2)
$\Omega_m h^3$	0.1106	$0.119^{+0.028}_{-0.025}$	$z_*$	1091.78	$1093.0^{+4.4}_{-4.3}$	$\chi_{6\text{DF}}^2$	0.011	0.08 ( $\nu$ : 0.0)
$\sigma_8$	0.748	$0.731^{+0.060}_{-0.062}$	$r_*$	138.1	$135^{+10}_{-10}$	$\chi_{\text{MGS}}^2$	1.41	1.42 ( $\nu$ : 0.2)
$\sigma_8 \Omega_m^{0.5}$	0.4149	$0.407^{+0.030}_{-0.033}$	$100\theta_*$	1.04053	$1.04035^{+0.00068}_{-0.00071}$	$\chi_{\text{DR11CMass}}^2$	2.42	3.1 ( $\nu$ : 0.5)
$\sigma_8 \Omega_m^{0.25}$	0.5570	$0.545^{+0.043}_{-0.044}$	$D_A/\text{Gpc}$	13.27	$13.00^{+0.96}_{-0.96}$	$\chi_{\text{DR11LOWZ}}^2$	0.49	0.77 ( $\nu$ : 0.3)
$\sigma_8/h^{0.5}$	0.887	$0.859^{+0.077}_{-0.080}$	$z_{\text{drag}}$	1061.23	$1061.6^{+4.4}_{-4.6}$	$\chi_{\text{CFHTLENS}}^2$	96.66	98.8 ( $\nu$ : 2.2)
$\langle d^2 \rangle^{1/2}$	2.207	$2.37^{+0.41}_{-0.39}$	$r_{\text{drag}}$	140.7	$138^{+10}_{-10}$	$\chi_{\text{prior}}^2$	0.02	2.0 ( $\nu$ : 1.9)
$z_{\text{re}}$	9.57	$9.83^{+0.88}_{-0.86}$	$k_D$	0.1452	$0.1467^{+0.0084}_{-0.0080}$	$\chi_{\text{BAO}}^2$	4.33	5.4 ( $\nu$ : 1.1)
$10^9 A_s$	1.71	$2.13^{+0.94}_{-0.80}$	$100\theta_D$	0.1631	$0.1650^{+0.0053}_{-0.0052}$			

Best-fit  $\chi_{\text{eff}}^2 = 101.04$ ;  $\bar{\chi}_{\text{eff}}^2 = 107.21$ ;  $R - 1 = 0.00658$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.42 DR11LOWZ: 0.49 Hubble - H070p6: 0.02 WL - CFHTLENS\_6bin\_conservative: 96.66

# 13 nnu+meffsterile+r

## 13.1 base\_nnu\_meffsterile\_r\_plikHM\_TT\_lowTEB\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02250^{+0.00060}_{-0.00058}$	$\Omega_m h^2$	$0.1474^{+0.0084}_{-0.0079}$	$k_D$	$0.1425^{+0.0030}_{-0.0027}$
$\Omega_c h^2$	$0.1219^{+0.0076}_{-0.0080}$	$\Omega_\nu h^2$	$< 0.00692$	$100\theta_D$	$0.1616^{+0.0011}_{-0.0010}$
$100\theta_{MC}$	$1.0406^{+0.0010}_{-0.0011}$	$\Omega_m h^3$	$0.1017^{+0.0091}_{-0.0071}$	$z_{eq}$	$3306^{+110}_{-120}$
$\tau$	$0.080^{+0.040}_{-0.037}$	$\sigma_8$	$0.798^{+0.056}_{-0.061}$	$k_{eq}$	$0.01033^{+0.00032}_{-0.00036}$
$m_{\nu, sterile}^{eff}$	$< 0.590$	$\sigma_8 \Omega_m^{0.5}$	$0.444^{+0.021}_{-0.022}$	$100\theta_{eq}$	$0.833^{+0.024}_{-0.023}$
$N_{eff}$	$< 3.80$	$\sigma_8 \Omega_m^{0.25}$	$0.595^{+0.029}_{-0.033}$	$100\theta_{s,eq}$	$0.459^{+0.012}_{-0.012}$
$\ln(10^{10} A_s)$	$3.099^{+0.081}_{-0.078}$	$\sigma_8/h^{0.5}$	$0.961^{+0.047}_{-0.055}$	$r_{drag}/D_V(0.57)$	$0.0716^{+0.0022}_{-0.0021}$
$n_s$	$0.980^{+0.025}_{-0.023}$	$\langle d^2 \rangle^{1/2}$	$2.448^{+0.060}_{-0.061}$	$H(0.57)$	$94.8^{+3.6}_{-2.7}$
$r$	$< 0.138$	$z_{re}$	$10.1^{+3.4}_{-3.6}$	$D_A(0.57)$	$1361^{+54}_{-66}$
$y_{cal}$	$1.0004^{+0.0048}_{-0.0049}$	$10^9 A_s$	$2.22^{+0.18}_{-0.17}$	$F_{AP}(0.57)$	$0.6757^{+0.0099}_{-0.0099}$
$A_{217}^{CIB}$	$66^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	$1.891^{+0.036}_{-0.033}$	$f\sigma_8(0.57)$	$0.464^{+0.025}_{-0.028}$
$\xi^{tSZ \times CIB}$	—	$D_{40}$	$1229^{+40}_{-40}$	$\sigma_8(0.57)$	$0.594^{+0.047}_{-0.053}$
$A_{143}^{tSZ}$	$4.7^{+3.9}_{-3.8}$	$D_{220}$	$5715^{+81}_{-80}$	$r_{0.002}$	$< 0.139$
$A_{100}^{PS}$	$266^{+60}_{-60}$	$D_{810}$	$2537^{+27}_{-28}$	$r_{0.01}$	$< 0.138$
$A_{143}^{PS}$	$47^{+20}_{-20}$	$D_{1420}$	$814^{+10}_{-10}$	$\ln(10^{10} A_t)$	$-0.3^{+1.9}_{-2.4}$
$A_{143 \times 217}^{PS}$	$40^{+20}_{-20}$	$D_{2000}$	$228.5^{+4.0}_{-4.1}$	$r_{10}$	$< 0.0703$
$A_{217}^{PS}$	$96^{+20}_{-20}$	$n_{s,0.002}$	$0.980^{+0.025}_{-0.023}$	$10^9 A_t$	$< 0.307$
$A^{kSZ}$	—	$Y_P$	$0.2498^{+0.0060}_{-0.0050}$	$10^9 A_t e^{-2\tau}$	$< 0.260$
$A_{100}^{dustTT}$	$7.5^{+3.6}_{-3.6}$	$Y_P^{BBN}$	$0.2511^{+0.0060}_{-0.0050}$	$f_{2000}^{143}$	$33^{+6}_{-6}$
$A_{143}^{dustTT}$	$9.1^{+3.7}_{-3.6}$	$10^5 D/H$	$2.68^{+0.12}_{-0.12}$	$f_{2000}^{143 \times 217}$	$35^{+5}_{-5}$
$A_{143 \times 217}^{dustTT}$	$17.4^{+8.1}_{-8.0}$	$Age/Gyr$	$13.54^{+0.34}_{-0.44}$	$f_{2000}^{217}$	$107.9^{+4.5}_{-4.4}$
$A_{217}^{dustTT}$	$82^{+10}_{-10}$	$z_*$	$1090.4^{+1.0}_{-1.0}$	$\chi^2_{lensing}$	$9.7 (\nu: 0.9)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	$142.0^{+3.4}_{-3.8}$	$\chi^2_{lowTEB}$	$10496.8 (\nu: 2.7)$
$c_{217}$	$0.9962^{+0.0028}_{-0.0028}$	$100\theta_*$	$1.0406^{+0.0011}_{-0.0012}$	$\chi^2_{plik}$	$782.0 (\nu: 17.1)$
$H_0$	$69.0^{+4.4}_{-3.7}$	$D_A/Gpc$	$13.65^{+0.32}_{-0.35}$	$\chi^2_{prior}$	$7.5 (\nu: 6.6)$
$\Omega_\Lambda$	$0.689^{+0.038}_{-0.040}$	$z_{drag}$	$1060.7^{+1.9}_{-1.7}$	$\chi^2_{CMB}$	$11288.5 (\nu: 18.6)$
$\Omega_m$	$0.311^{+0.040}_{-0.038}$	$r_{drag}$	$144.6^{+3.5}_{-3.9}$		

$$\bar{\chi}^2_{eff} = 11295.99; R - 1 = 0.03538$$

### 13.2 base\_nnu\_meffsterile\_r\_plikHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022259	$0.02238^{+0.00035}_{-0.00034}$	$A_{143}^{\text{dust}TE}$	0.155	$0.16^{+0.11}_{-0.10}$	$100\theta_*$	1.04103	$1.04070^{+0.00075}_{-0.00083}$
$\Omega_c h^2$	0.1192	$0.1207^{+0.0054}_{-0.0058}$	$A_{143 \times 217}^{\text{dust}TE}$	0.339	$0.34^{+0.15}_{-0.16}$	$D_A/\text{Gpc}$	13.901	$13.74^{+0.20}_{-0.23}$
$100\theta_{\text{MC}}$	1.04083	$1.04060^{+0.00070}_{-0.00074}$	$A_{217}^{\text{dust}TE}$	1.666	$1.67^{+0.49}_{-0.49}$	$z_{\text{drag}}$	1059.63	$1060.3^{+1.1}_{-1.0}$
$\tau$	0.0623	$0.069^{+0.030}_{-0.030}$	$c_{100}$	0.99814	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.42	$145.6^{+2.2}_{-2.6}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	0.001	$< 0.646$	$c_{217}$	0.99615	$0.9962^{+0.0028}_{-0.0028}$	$k_D$	0.14044	$0.1419^{+0.0021}_{-0.0018}$
$N_{\text{eff}}$	3.047	$< 3.46$	$H_0$	67.51	$67.4^{+2.0}_{-1.9}$	$100\theta_D$	0.16093	$0.16118^{+0.00060}_{-0.00055}$
$\ln(10^{10} A_s)$	3.057	$3.076^{+0.060}_{-0.058}$	$\Omega_\Lambda$	0.6882	$0.677^{+0.027}_{-0.028}$	$z_{\text{eq}}$	3380	$3339^{+84}_{-88}$
$n_s$	0.9656	$0.969^{+0.014}_{-0.013}$	$\Omega_m$	0.3118	$0.323^{+0.028}_{-0.027}$	$k_{\text{eq}}$	0.010318	$0.01034^{+0.00027}_{-0.00028}$
$r$	0.000	$< 0.121$	$\Omega_m h^2$	0.1421	$0.1466^{+0.0068}_{-0.0060}$	$100\theta_{\text{eq}}$	0.8168	$0.826^{+0.019}_{-0.017}$
$y_{\text{cal}}$	0.999996	$1.0003^{+0.0047}_{-0.0048}$	$\Omega_\nu h^2$	0.00065	$< 0.00751$	$100\theta_{s, \text{eq}}$	0.4513	$0.4562^{+0.0098}_{-0.0090}$
$A_{217}^{\text{CIB}}$	68.2	$66^{+10}_{-10}$	$\Omega_m h^3$	0.09595	$0.0988^{+0.0044}_{-0.0036}$	$r_{\text{drag}}/D_V(0.57)$	0.07156	$0.0710^{+0.0014}_{-0.0015}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$\sigma_8$	0.814	$0.784^{+0.047}_{-0.054}$	$H(0.57)$	92.95	$93.6^{+1.5}_{-1.2}$
$A_{143}^{\text{tSZ}}$	7.25	$5.1^{+3.7}_{-3.9}$	$\sigma_8 \Omega_m^{0.5}$	0.4546	$0.445^{+0.020}_{-0.022}$	$D_A(0.57)$	1389.0	$1386^{+26}_{-30}$
$A_{100}^{\text{PS}}$	257	$266^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6083	$0.591^{+0.029}_{-0.033}$	$F_{\text{AP}}(0.57)$	0.6761	$0.6788^{+0.0070}_{-0.0067}$
$A_{143}^{\text{PS}}$	39.1	$46^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.991	$0.955^{+0.049}_{-0.057}$	$f\sigma_8(0.57)$	0.4734	$0.459^{+0.024}_{-0.027}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.453	$2.463^{+0.056}_{-0.054}$	$\sigma_8(0.57)$	0.6055	$0.581^{+0.040}_{-0.044}$
$A_{217}^{\text{PS}}$	96.2	$96^{+20}_{-20}$	$z_{\text{re}}$	8.49	$9.1^{+2.9}_{-2.9}$	$r_{0.002}$	0.000	$< 0.116$
$A^{\text{kSZ}}$	0.0	—	$10^9 A_s$	2.126	$2.17^{+0.13}_{-0.12}$	$r_{0.01}$	0.000	$< 0.118$
$A_{100}^{\text{dust}TT}$	7.50	$7.5^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8771	$1.888^{+0.027}_{-0.026}$	$\ln(10^{10} A_t)$	-5.36	$-0.4^{+1.9}_{-2.4}$
$A_{143}^{\text{dust}TT}$	9.02	$9.1^{+3.6}_{-3.6}$	$D_{40}$	1229.7	$1240^{+36}_{-31}$	$r_{10}$	0.0001	$< 0.0593$
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.3^{+8.1}_{-8.0}$	$D_{220}$	5721	$5719^{+73}_{-75}$	$10^9 A_t$	0.000	$< 0.262$
$A_{217}^{\text{dust}TT}$	81.7	$82^{+10}_{-10}$	$D_{810}$	2533.7	$2536^{+26}_{-26}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.228$
$A_{100}^{\text{dust}EE}$	0.0814	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	814.4	$813.7^{+9.4}_{-9.4}$	$f_{2000}^{143}$	30.0	$32^{+6}_{-6}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0492	$0.0484^{+0.010}_{-0.0098}$	$D_{2000}$	230.00	$228.9^{+3.5}_{-3.4}$	$f_{2000}^{143 \times 217}$	32.68	$34^{+4}_{-4}$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.0998^{+0.065}_{-0.063}$	$n_{s, 0.002}$	0.9656	$0.969^{+0.014}_{-0.013}$	$f_{2000}^{217}$	106.19	$107.3^{+4.0}_{-4.0}$
$A_{143}^{\text{dust}EE}$	0.1006	$0.0997^{+0.013}_{-0.013}$	$Y_P$	0.24535	$0.2478^{+0.0034}_{-0.0028}$	$\chi_{\text{lensing}}^2$	9.67	$10.2 (\nu: 1.4)$
$A_{143 \times 217}^{\text{dust}EE}$	0.225	$0.223^{+0.092}_{-0.091}$	$Y_P^{\text{BBN}}$	0.24668	$0.2491^{+0.0034}_{-0.0028}$	$\chi_{\text{lowTEB}}^2$	10495.31	$10497.2 (\nu: 2.1)$
$A_{217}^{\text{dust}EE}$	0.657	$0.65^{+0.25}_{-0.26}$	$10^5 \text{D}/\text{H}$	2.613	$2.651^{+0.082}_{-0.080}$	$\chi_{\text{plik}}^2$	2434.9	$2455.9 (\nu: 25.0)$
$A_{100}^{\text{dust}TE}$	0.140	$0.142^{+0.075}_{-0.074}$	$\text{Age}/\text{Gyr}$	13.808	$13.70^{+0.16}_{-0.20}$	$\chi_{\text{prior}}^2$	7.2	$19.5 (\nu: 15.4)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.057}_{-0.057}$	$z_*$	1089.99	$1090.34^{+0.76}_{-0.76}$	$\chi_{\text{CMB}}^2$	12939.9	$12963.3 (\nu: 25.7)$
$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.16}_{-0.17}$	$r_*$	144.71	$143.0^{+2.2}_{-2.5}$			

Best-fit  $\chi_{\text{eff}}^2 = 12947.08$ ;  $\bar{\chi}_{\text{eff}}^2 = 12982.78$ ;  $R - 1 = 0.02047$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.67 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.31 plik\_dx11dr2\_HM\_v18.TTTEEE: 2434.94

### 13.3 base\_nnu\_meffsterile\_r\_CamSpecHM\_TT\_lowTEB\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02250^{+0.00062}_{-0.00058} (+0.0\sigma)$	$\Omega_\Lambda$	$0.690^{+0.040}_{-0.038} (+0.1\sigma)$	$100\theta_D$	$0.1615^{+0.0011}_{-0.0010} (-0.1\sigma)$
$\Omega_c h^2$	$0.1216^{+0.0074}_{-0.0071} (-0.1\sigma)$	$\Omega_m$	$0.310^{+0.038}_{-0.040} (-0.1\sigma)$	$z_{\text{eq}}$	$3306^{+100}_{-120} (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04068^{+0.00097}_{-0.0010} (+0.1\sigma)$	$\Omega_m h^2$	$0.1470^{+0.0081}_{-0.0074} (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.833^{+0.024}_{-0.022} (+0.0\sigma)$
$\tau$	$0.081^{+0.041}_{-0.038} (+0.1\sigma)$	$\Omega_\nu h^2$	$< 0.00664 (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0717^{+0.0023}_{-0.0022} (+0.1\sigma)$
$m_{\nu, \text{sterile}}^{\text{eff}}$	$< 0.564 (-0.1\sigma)$	$\Omega_m h^3$	$< 0.110 (-0.1\sigma)$	$H(0.57)$	$94.8^{+3.7}_{-2.7} (-0.0\sigma)$
$N_{\text{eff}}$	$< 3.80 (-0.1\sigma)$	$\sigma_8$	$0.800^{+0.052}_{-0.060} (+0.1\sigma)$	$D_A(0.57)$	$1361^{+54}_{-69} (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.100^{+0.082}_{-0.081} (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.444^{+0.021}_{-0.021} (+0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.6754^{+0.0095}_{-0.010} (-0.1\sigma)$
$n_s$	$0.981^{+0.027}_{-0.023} (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.596^{+0.028}_{-0.032} (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.465^{+0.024}_{-0.027} (+0.1\sigma)$
$r$	$< 0.138 (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.963^{+0.046}_{-0.053} (+0.1\sigma)$	$\sigma_8(0.57)$	$0.596^{+0.048}_{-0.051} (+0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0048} (-0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.445^{+0.059}_{-0.061} (-0.1\sigma)$	$r_{0.002}$	$< 0.140 (-0.0\sigma)$
$A_{100}^{\text{PS}}$	$252^{+40}_{-50} (-0.5\sigma)$	$z_{\text{re}}$	$10.3^{+3.4}_{-3.7} (+0.1\sigma)$	$r_{0.01}$	$< 0.139 (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$42^{+20}_{-20} (-0.6\sigma)$	$10^9 A_s$	$2.22^{+0.18}_{-0.18} (+0.0\sigma)$	$\ln(10^{10} A_t)$	$-0.3^{+2.0}_{-2.5} (-0.0\sigma)$
$A_{217}^{\text{PS}}$	$96^{+30}_{-30} (-0.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.886^{+0.035}_{-0.034} (-0.3\sigma)$	$r_{10}$	$< 0.0706 (-0.0\sigma)$
$A_{217}^{\text{CIB}}$	$48^{+10}_{-10} (-2.7\sigma)$	$D_{40}$	$1223^{+42}_{-38} (-0.3\sigma)$	$10^9 A_t$	$< 0.308 (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.30 (-0.9\sigma)$	$D_{220}$	$5695^{+81}_{-80} (-0.5\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.260 (-0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.19}$	$D_{810}$	$2533^{+28}_{-28} (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$< 0.256 (-0.2\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{1420}$	$813^{+10}_{-9.9} (-0.0\sigma)$	$f_{2000}^{143}$	$31^{+6}_{-6} (-0.5\sigma)$
$A^{\text{kSZ}}$	—	$n_{s,0.002}$	$0.981^{+0.027}_{-0.023} (+0.1\sigma)$	$f_{2000}^{217}$	$108.0^{+4.4}_{-4.3} (+0.1\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.37}$	$Y_{\text{P}}$	$< 0.255 (-0.2\sigma)$	$f_{2000}^{143 \times 217}$	$34^{+5}_{-5} (-0.4\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.36}$	$\text{Age/Gyr}$	$13.55^{+0.34}_{-0.45} (+0.0\sigma)$	$\chi^2_{\text{lensing}}$	$9.6 (\nu: 0.7) (-0.1\sigma)$
$A_{217}^{\text{dust}}$	$1.20^{+0.23}_{-0.23}$	$z_*$	$1090.3^{+1.0}_{-0.93} (-0.1\sigma)$	$\chi^2_{\text{lowTEB}}$	$10496.5 (\nu: 2.8) (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.35}$	$r_*$	$142.2^{+3.3}_{-3.8} (+0.1\sigma)$	$\chi^2_{\text{CamSpec}}$	$8063.6 (\nu: 18.1)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	$100\theta_*$	$1.0407^{+0.0011}_{-0.0012} (+0.1\sigma)$	$\chi^2_{\text{prior}}$	$8.4 (\nu: 6.1) (+0.2\sigma)$
$c_{217}$	$0.9975^{+0.0035}_{-0.0035} (+0.9\sigma)$	$z_{\text{drag}}$	$1060.7^{+1.9}_{-1.7} (-0.1\sigma)$	$\chi^2_{\text{CMB}}$	$18569.7 (\nu: 19.9) (+1193.2\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_{\text{drag}}$	$144.7^{+3.4}_{-3.9} (+0.1\sigma)$		
$H_0$	$69.0^{+4.6}_{-3.7} (+0.0\sigma)$	$k_D$	$0.1424^{+0.0030}_{-0.0026} (-0.1\sigma)$		

$\bar{\chi}^2_{\text{eff}} = 18578.06$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 7282.07$ ;  $R - 1 = 0.03915$

### 13.4 base\_nnu\_meffsterile\_r\_CamSpecHM\_TT\_lowTEB\_lensing\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02248^{+0.00048}_{-0.00047}$	$\Omega_m$	$0.308^{+0.016}_{-0.016}$	$100\theta_{\text{eq}}$	$0.832^{+0.018}_{-0.018}$
$\Omega_c h^2$	$0.1209^{+0.0073}_{-0.0072}$	$\Omega_m h^2$	$0.1461^{+0.0073}_{-0.0062}$	$r_{\text{drag}}/D_V(0.57)$	$0.07175^{+0.00092}_{-0.00090}$
$100\theta_{\text{MC}}$	$1.04075^{+0.00094}_{-0.0010}$	$\Omega_\nu h^2$	$0.0027^{+0.0030}_{-0.0026}$	$H(0.57)$	$94.5^{+2.6}_{-2.0}$
$\tau$	$0.081^{+0.034}_{-0.034}$	$\Omega_m h^3$	$< 0.108$	$D_A(0.57)$	$1364^{+35}_{-42}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	$< 0.466$	$\sigma_8$	$0.801^{+0.039}_{-0.043}$	$F_{\text{AP}}(0.57)$	$0.6751^{+0.0042}_{-0.0041}$
$N_{\text{eff}}$	$< 3.70$	$\sigma_8 \Omega_m^{0.5}$	$0.445^{+0.020}_{-0.021}$	$f\sigma_8(0.57)$	$0.466^{+0.021}_{-0.023}$
$\ln(10^{10} A_s)$	$3.097^{+0.070}_{-0.072}$	$\sigma_8 \Omega_m^{0.25}$	$0.597^{+0.027}_{-0.029}$	$\sigma_8(0.57)$	$0.597^{+0.031}_{-0.034}$
$n_s$	$0.980^{+0.019}_{-0.017}$	$\sigma_8/h^{0.5}$	$0.965^{+0.042}_{-0.045}$	$r_{0.002}$	$< 0.135$
$r$	$< 0.136$	$\langle d^2 \rangle^{1/2}$	$2.444^{+0.052}_{-0.053}$	$r_{0.01}$	$< 0.136$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0048}$	$z_{\text{re}}$	$10.2^{+3.0}_{-3.1}$	$\ln(10^{10} A_t)$	$-0.4^{+2.0}_{-2.5}$
$A_{100}^{\text{PS}}$	$251^{+40}_{-50}$	$10^9 A_s$	$2.22^{+0.16}_{-0.16}$	$r_{10}$	$< 0.0687$
$A_{143}^{\text{PS}}$	$42^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.034}_{-0.032}$	$10^9 A_t$	$< 0.301$
$A_{217}^{\text{PS}}$	$96^{+30}_{-30}$	$D_{40}$	$1223^{+40}_{-37}$	$10^9 A_t e^{-2\tau}$	$< 0.255$
$A_{217}^{\text{CIB}}$	$48^{+10}_{-10}$	$D_{220}$	$5695^{+79}_{-79}$	$Y_{\text{P}}^{\text{BBN}}$	$< 0.255$
$A_{143}^{\text{tSZ}}$	$< 6.38$	$D_{810}$	$2532^{+28}_{-28}$	$f_{2000}^{143}$	$31^{+6}_{-6}$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{1420}$	$813.7^{+9.9}_{-9.7}$	$f_{2000}^{217}$	$107.7^{+4.3}_{-4.1}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$n_{\text{s}, 0.002}$	$0.980^{+0.019}_{-0.017}$	$f_{2000}^{143 \times 217}$	$33^{+5}_{-4}$
$A^{\text{kSZ}}$	—	$Y_{\text{P}}$	$< 0.253$	$\chi_{\text{lensing}}^2$	$9.5 (\nu: 0.7)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.37}$	Age/Gyr	$13.58^{+0.28}_{-0.35}$	$\chi_{\text{lowTEB}}^2$	$10496.3 (\nu: 2.5)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$z_*$	$1090.22^{+0.85}_{-0.80}$	$\chi_{\text{CamSpec}}^2$	$8063.0 (\nu: 17.1)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$r_*$	$142.6^{+2.9}_{-3.5}$	$\chi_{6\text{DF}}^2$	$0.058 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.34}$	$100\theta_*$	$1.0408^{+0.0011}_{-0.0012}$	$\chi_{\text{MGS}}^2$	$1.48 (\nu: 0.2)$
$c_{100}$	$0.9967^{+0.0019}_{-0.0019}$	$z_{\text{drag}}$	$1060.5^{+1.6}_{-1.5}$	$\chi_{\text{DR11CMass}}^2$	$2.96 (\nu: 0.3)$
$c_{217}$	$0.9974^{+0.0034}_{-0.0035}$	$r_{\text{drag}}$	$145.2^{+3.0}_{-3.7}$	$\chi_{\text{DR11LOWZ}}^2$	$0.65 (\nu: 0.2)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$k_{\text{D}}$	$0.1421^{+0.0028}_{-0.0023}$	$\chi_{\text{prior}}^2$	$8.4 (\nu: 6.0)$
$H_0$	$68.9^{+2.4}_{-2.1}$	$100\theta_{\text{D}}$	$0.1614^{+0.0011}_{-0.00096}$	$\chi_{\text{CMB}}^2$	$18568.8 (\nu: 18.4)$
$\Omega_\Lambda$	$0.692^{+0.016}_{-0.016}$	$z_{\text{eq}}$	$3308^{+88}_{-88}$	$\chi_{\text{BAO}}^2$	$5.2 (\nu: 0.6)$

$$\bar{\chi}_{\text{eff}}^2 = 18582.34; R - 1 = 0.06651$$



### 13.5 base\_nnu\_meffsterile\_r\_CamSpecHM\_TTTEEE\_lowTEB\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00035}_{-0.00035} \quad (+0.4\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$r_{\text{drag}}$	$146.0^{+1.9}_{-2.3} \quad (+0.3\sigma)$
$\Omega_c h^2$	$0.1192^{+0.0060}_{-0.0067} \quad (-0.5\sigma)$	$H_0$	$67.7^{+1.7}_{-1.7} \quad (+0.3\sigma)$	$k_D$	$0.1416^{+0.0019}_{-0.0016} \quad (-0.3\sigma)$
$100\theta_{\text{MC}}$	$1.04069^{+0.00067}_{-0.00069} \quad (+0.3\sigma)$	$\Omega_\Lambda$	$0.683^{+0.024}_{-0.026} \quad (+0.4\sigma)$	$100\theta_D$	$0.16099^{+0.00057}_{-0.00053} \quad (-0.7\sigma)$
$\tau$	$0.071^{+0.028}_{-0.028} \quad (+0.1\sigma)$	$\Omega_m$	$0.317^{+0.026}_{-0.024} \quad (-0.4\sigma)$	$z_{\text{eq}}$	$3321^{+99}_{-110} \quad (-0.4\sigma)$
$m_{\nu, \text{sterile}}^{\text{eff}}$	$< 0.668 \quad (+0.0\sigma)$	$\Omega_m h^2$	$0.1452^{+0.0062}_{-0.0054} \quad (-0.4\sigma)$	$100\theta_{\text{eq}}$	$0.830^{+0.024}_{-0.021} \quad (+0.4\sigma)$
$N_{\text{eff}}$	$< 3.39 \quad (-0.3\sigma)$	$\Omega_\nu h^2$	$< 0.00775 \quad (+0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0712^{+0.0013}_{-0.0014} \quad (+0.4\sigma)$
$\ln(10^{10} A_s)$	$3.075^{+0.056}_{-0.055} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.0983^{+0.0037}_{-0.0029} \quad (-0.2\sigma)$	$H(0.57)$	$93.5^{+1.2}_{-1.0} \quad (-0.0\sigma)$
$n_s$	$0.972^{+0.013}_{-0.012} \quad (+0.4\sigma)$	$\sigma_8$	$0.784^{+0.047}_{-0.052} \quad (-0.0\sigma)$	$D_A(0.57)$	$1383^{+23}_{-24} \quad (-0.2\sigma)$
$r$	$< 0.164 \quad (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.441^{+0.021}_{-0.023} \quad (-0.4\sigma)$	$F_{\text{AP}}(0.57)$	$0.6774^{+0.0065}_{-0.0061} \quad (-0.4\sigma)$
$y_{\text{cal}}$	$1.0002^{+0.0050}_{-0.0048} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.588^{+0.029}_{-0.032} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.458^{+0.024}_{-0.026} \quad (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$248^{+40}_{-40} \quad (-0.7\sigma)$	$\sigma_8/h^{0.5}$	$0.953^{+0.050}_{-0.056} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.582^{+0.038}_{-0.043} \quad (+0.1\sigma)$
$A_{143}^{\text{PS}}$	$41^{+10}_{-10} \quad (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.452^{+0.053}_{-0.053} \quad (-0.4\sigma)$	$r_{0.002}$	$< 0.162 \quad (+0.6\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$9.3^{+2.7}_{-2.8} \quad (+0.1\sigma)$	$r_{0.01}$	$< 0.163 \quad (+0.6\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.9\sigma)$	$10^9 A_s$	$2.17^{+0.12}_{-0.12} \quad (-0.0\sigma)$	$\ln(10^{10} A_t)$	$0.0^{+1.7}_{-2.2} \quad (+0.4\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.62 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.027}_{-0.026} \quad (-0.7\sigma)$	$r_{10}$	$< 0.0830 \quad (+0.6\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.20}$	$D_{40}$	$1240^{+39}_{-36} \quad (+0.0\sigma)$	$10^9 A_t$	$< 0.355 \quad (+0.6\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5702^{+75}_{-76} \quad (-0.4\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.308 \quad (+0.6\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2531^{+28}_{-27} \quad (-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$< 0.251 \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.38}_{-0.38}$	$D_{1420}$	$814.1^{+9.9}_{-9.6} \quad (+0.1\sigma)$	$f_{2000}^{143}$	$30^{+5}_{-6} \quad (-0.6\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.36}$	$n_{\text{s}, 0.002}$	$0.972^{+0.013}_{-0.012} \quad (+0.4\sigma)$	$f_{2000}^{217}$	$107.1^{+3.9}_{-3.9} \quad (-0.1\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.23}$	$Y_{\text{P}}$	$< 0.250 \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4} \quad (-0.7\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.35}$	$\text{Age}/\text{Gyr}$	$13.71^{+0.13}_{-0.17} \quad (+0.1\sigma)$	$\chi_{\text{lensing}}^2$	$9.8 (\nu: 0.8) \quad (-0.3\sigma)$
$c_{100}$	$0.9967^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1090.07^{+0.73}_{-0.72} \quad (-0.7\sigma)$	$\chi_{\text{lowTEB}}^2$	$10497.5 (\nu: 2.8) \quad (+0.1\sigma)$
$c_{217}$	$0.9972^{+0.0035}_{-0.0035} \quad (+0.7\sigma)$	$r_*$	$143.4^{+1.9}_{-2.2} \quad (+0.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$12954.4 (\nu: 19.9)$
$c_{\text{TE}}$	$1.0056^{+0.0087}_{-0.0086}$	$100\theta_*$	$1.04082^{+0.00072}_{-0.00074} \quad (+0.3\sigma)$	$\chi_{\text{prior}}^2$	$9.2 (\nu: 6.4) \quad (-1.9\sigma)$
$c_{\text{EE}}$	$1.0024^{+0.0086}_{-0.0085}$	$z_{\text{drag}}$	$1060.3^{+1.1}_{-0.97} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$23461.7 (\nu: 21.1) \quad (+1464.2\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 23470.89; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.11; R - 1 = 0.01900$$

### 13.6 base\_nnu\_meffsterile\_r\_CamSpecHM\_TTTEEE\_lowTEB\_lensing\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02247^{+0.00032}_{-0.00033}$	$\Omega_\Lambda$	$0.689^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	$0.831^{+0.026}_{-0.019}$
$\Omega_c h^2$	$0.1183^{+0.0055}_{-0.0066}$	$\Omega_m$	$0.311^{+0.014}_{-0.014}$	$r_{\text{drag}}/D_V(0.57)$	$0.07160^{+0.00077}_{-0.00079}$
$100\theta_{\text{MC}}$	$1.04078^{+0.00058}_{-0.00065}$	$\Omega_m h^2$	$0.1438^{+0.0043}_{-0.0036}$	$H(0.57)$	$93.6^{+1.2}_{-0.92}$
$\tau$	$0.073^{+0.027}_{-0.027}$	$\Omega_\nu h^2$	$< 0.00722$	$D_A(0.57)$	$1379^{+19}_{-21}$
$m_{\nu, \text{sterile}}^{\text{eff}}$	$< 0.619$	$\Omega_m h^3$	$0.0978^{+0.0035}_{-0.0025}$	$F_{\text{AP}}(0.57)$	$0.6758^{+0.0036}_{-0.0035}$
$N_{\text{eff}}$	$< 3.34$	$\sigma_8$	$0.793^{+0.038}_{-0.041}$	$f\sigma_8(0.57)$	$0.461^{+0.021}_{-0.023}$
$\ln(10^{10} A_s)$	$3.077^{+0.054}_{-0.052}$	$\sigma_8 \Omega_m^{0.5}$	$0.442^{+0.020}_{-0.022}$	$\sigma_8(0.57)$	$0.590^{+0.030}_{-0.032}$
$n_s$	$0.973^{+0.012}_{-0.011}$	$\sigma_8 \Omega_m^{0.25}$	$0.592^{+0.027}_{-0.029}$	$r_{0.002}$	$< 0.164$
$r$	$< 0.166$	$\sigma_8/h^{0.5}$	$0.961^{+0.043}_{-0.047}$	$r_{0.01}$	$< 0.165$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0050}$	$\langle d^2 \rangle^{1/2}$	$2.447^{+0.049}_{-0.052}$	$\ln(10^{10} A_t)$	$0.1^{+1.7}_{-2.2}$
$A_{100}^{\text{PS}}$	$246^{+40}_{-40}$	$z_{\text{re}}$	$9.4^{+2.4}_{-2.6}$	$r_{10}$	$< 0.0840$
$A_{143}^{\text{PS}}$	$40^{+10}_{-10}$	$10^9 A_s$	$2.17^{+0.12}_{-0.11}$	$10^9 A_t$	$< 0.360$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.025}_{-0.024}$	$10^9 A_t e^{-2\tau}$	$< 0.311$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10}$	$D_{40}$	$1240^{+39}_{-36}$	$Y_{\text{P}}^{\text{BBN}}$	$< 0.250$
$A_{143}^{\text{tSZ}}$	$< 6.80$	$D_{220}$	$5705^{+74}_{-76}$	$f_{2000}^{143}$	$29^{+5}_{-5}$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{810}$	$2530^{+28}_{-27}$	$f_{2000}^{217}$	$106.7^{+3.7}_{-3.8}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{1420}$	$814.6^{+9.9}_{-9.6}$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$
$A^{\text{kSZ}}$	—	$n_{\text{s}, 0.002}$	$0.973^{+0.012}_{-0.011}$	$\chi_{\text{lensing}}^2$	$9.7 (\nu: 0.7)$
$A_{100}^{\text{dust}}$	$0.98^{+0.38}_{-0.37}$	$Y_{\text{P}}$	$< 0.249$	$\chi_{\text{lowTEB}}^2$	$10497.4 (\nu: 2.8)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.36}$	Age/Gyr	$13.72^{+0.12}_{-0.17}$	$\chi_{\text{CamSpec}}^2$	$12953.9 (\nu: 19.4)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.23}$	$z_*$	$1089.91^{+0.56}_{-0.49}$	$\chi_{6\text{DF}}^2$	$0.064 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.36}_{-0.34}$	$r_*$	$143.8^{+1.4}_{-1.9}$	$\chi_{\text{MGS}}^2$	$1.28 (\nu: 0.1)$
$c_{100}$	$0.9967^{+0.0019}_{-0.0019}$	$100\theta_*$	$1.04092^{+0.00066}_{-0.00069}$	$\chi_{\text{DR11CMass}}^2$	$2.91 (\nu: 0.3)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0035}$	$z_{\text{drag}}$	$1060.25^{+0.96}_{-0.88}$	$\chi_{\text{DR11LOWZ}}^2$	$0.81 (\nu: 0.2)$
$c_{TE}$	$1.0054^{+0.0087}_{-0.0088}$	$r_{\text{drag}}$	$146.5^{+1.5}_{-1.9}$	$\chi_{\text{prior}}^2$	$9.2 (\nu: 6.4)$
$c_{EE}$	$1.0022^{+0.0087}_{-0.0084}$	$k_{\text{D}}$	$0.1413^{+0.0015}_{-0.0013}$	$\chi_{\text{CMB}}^2$	$23461.0 (\nu: 20.3)$
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_{\text{D}}$	$0.16093^{+0.00056}_{-0.00049}$	$\chi_{\text{BAO}}^2$	$5.1 (\nu: 0.5)$
$H_0$	$68.0^{+1.3}_{-1.2}$	$z_{\text{eq}}$	$3314^{+90}_{-120}$		

$$\bar{\chi}_{\text{eff}}^2 = 23475.30; R - 1 = 0.02479$$

## 14 nnu+mnu

### 14.1 base\_nnu\_mnu\_plikHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02231	$0.02215^{+0.00080}_{-0.00084}$	$\Omega_\Lambda$	0.695	$0.661^{+0.077}_{-0.10}$	$r_*$	144.4	$144.3^{+5.3}_{-5.2}$
$\Omega_c h^2$	0.1197	$0.1205^{+0.0079}_{-0.0077}$	$\Omega_m$	0.305	$0.339^{+0.10}_{-0.077}$	$100\theta_*$	1.04107	$1.0409^{+0.0014}_{-0.0013}$
$100\theta_{MC}$	1.04094	$1.0407^{+0.0011}_{-0.0011}$	$\Omega_m h^2$	0.1420	$0.145^{+0.010}_{-0.0089}$	$D_A/\text{Gpc}$	13.872	$13.86^{+0.49}_{-0.48}$
$\tau$	0.0789	$0.081^{+0.043}_{-0.041}$	$\Omega_\nu h^2$	0.00000	$< 0.00780$	$z_{\text{drag}}$	1059.78	$1059.5^{+2.6}_{-2.6}$
$\Sigma m_\nu [\text{eV}]$	0.000	$< 0.725$	$\Omega_m h^3$	0.0969	$0.096^{+0.013}_{-0.013}$	$r_{\text{drag}}$	147.1	$147.1^{+5.6}_{-5.4}$
$N_{\text{eff}}$	3.07	$3.08^{+0.63}_{-0.60}$	$\sigma_8$	0.844	$0.796^{+0.090}_{-0.12}$	$k_D$	0.14069	$0.1407^{+0.0040}_{-0.0039}$
$\ln(10^{10} A_s)$	3.092	$3.098^{+0.093}_{-0.088}$	$\sigma_8 \Omega_m^{0.5}$	0.4659	$0.461^{+0.027}_{-0.028}$	$100\theta_D$	0.16096	$0.1611^{+0.0013}_{-0.0013}$
$n_s$	0.9681	$0.965^{+0.032}_{-0.033}$	$\sigma_8 \Omega_m^{0.25}$	0.627	$0.606^{+0.045}_{-0.056}$	$z_{\text{eq}}$	3381	$3398^{+160}_{-150}$
$y_{\text{cal}}$	1.00030	$1.0004^{+0.0050}_{-0.0049}$	$\sigma_8/h^{0.5}$	1.021	$0.981^{+0.073}_{-0.096}$	$k_{\text{eq}}$	0.010339	$0.01039^{+0.00032}_{-0.00031}$
$A_{217}^{\text{CIB}}$	65.7	$64^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.500	$2.497^{+0.098}_{-0.098}$	$100\theta_{\text{eq}}$	0.8168	$0.814^{+0.030}_{-0.029}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.13	—	$z_{\text{re}}$	10.04	$10.3^{+3.7}_{-4.0}$	$100\theta_{s,\text{eq}}$	0.4513	$0.450^{+0.015}_{-0.015}$
$A_{143}^{\text{tSZ}}$	7.03	$5.0^{+3.8}_{-3.9}$	$10^9 A_s$	2.203	$2.22^{+0.21}_{-0.20}$	$r_{\text{drag}}/D_V(0.57)$	0.07192	$0.0704^{+0.0036}_{-0.0044}$
$A_{100}^{\text{PS}}$	252	$260^{+60}_{-60}$	$10^9 A_s e^{-2\tau}$	1.8810	$1.882^{+0.042}_{-0.044}$	$H(0.57)$	93.5	$92.2^{+5.6}_{-5.9}$
$A_{143}^{\text{PS}}$	40.7	$45^{+20}_{-20}$	$D_{40}$	1232.9	$1236^{+44}_{-42}$	$D_A(0.57)$	1378	$1415^{+140}_{-120}$
$A_{143 \times 217}^{\text{PS}}$	36.2	$40^{+20}_{-20}$	$D_{220}$	5719	$5716^{+81}_{-79}$	$F_{\text{AP}}(0.57)$	0.6744	$0.683^{+0.024}_{-0.019}$
$A_{217}^{\text{PS}}$	99.4	$97^{+20}_{-20}$	$D_{810}$	2534.6	$2535^{+28}_{-28}$	$f\sigma_8(0.57)$	0.4876	$0.470^{+0.038}_{-0.050}$
$A^{\text{kSZ}}$	0.0	—	$D_{1420}$	815.0	$814^{+10}_{-10}$	$\sigma_8(0.57)$	0.629	$0.588^{+0.079}_{-0.10}$
$A_{100}^{\text{dustTT}}$	7.44	$7.5^{+3.7}_{-3.7}$	$D_{2000}$	230.61	$229.7^{+4.5}_{-4.5}$	$f_{2000}^{143}$	29.4	$31^{+7}_{-7}$
$A_{143}^{\text{dustTT}}$	9.08	$9.0^{+3.6}_{-3.6}$	$n_{s,0.002}$	0.9681	$0.965^{+0.032}_{-0.033}$	$f_{2000}^{143 \times 217}$	32.1	$33^{+5}_{-5}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.2^{+8.1}_{-8.2}$	$Y_P$	0.2457	$0.2456^{+0.0085}_{-0.0087}$	$f_{2000}^{217}$	105.68	$106.7^{+4.8}_{-4.7}$
$A_{217}^{\text{dustTT}}$	82.4	$82^{+10}_{-10}$	$Y_P^{\text{BBN}}$	0.2471	$0.2469^{+0.0085}_{-0.0087}$	$\chi_{\text{lowTEB}}^2$	10496.3	$10497.9 (\nu: 4.5)$
$c_{100}$	0.99790	$0.9979^{+0.0015}_{-0.0015}$	$10^5 D/H$	2.613	$2.64^{+0.14}_{-0.13}$	$\chi_{\text{plik}}^2$	763.3	$779.1 (\nu: 19.2)$
$c_{217}$	0.99585	$0.9960^{+0.0028}_{-0.0029}$	$\text{Age/Gyr}$	13.75	$13.89^{+0.82}_{-0.71}$	$\chi_{\text{prior}}^2$	2.0	$7.4 (\nu: 6.5)$
$H_0$	68.2	$66^{+8}_{-9}$	$z_*$	1090.00	$1090.3^{+1.2}_{-1.1}$	$\chi_{\text{CMB}}^2$	11259.6	$11277.0 (\nu: 17.8)$

Best-fit  $\chi_{\text{eff}}^2 = 11261.51$ ;  $\bar{\chi}_{\text{eff}}^2 = 11284.42$ ;  $R - 1 = 0.00589$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.29 plik\_dx11dr2\_HM\_v18\_TT: 763.27

## 14.2 base\_nnu\_mnu\_plikHM\_TT\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022268	$0.02236^{+0.00049}_{-0.00050}$	$\Omega_m h^2$	0.1423	$0.1442^{+0.0086}_{-0.0083}$	$r_{\text{drag}}$	147.11	$146.3^{+4.9}_{-4.5}$
$\Omega_c h^2$	0.1200	$0.1207^{+0.0080}_{-0.0078}$	$\Omega_\nu h^2$	0.00004	$< 0.00286$	$k_D$	0.14068	$0.1412^{+0.0034}_{-0.0035}$
$100\theta_{\text{MC}}$	1.04089	$1.0408^{+0.0011}_{-0.0011}$	$\Omega_m h^3$	0.0968	$0.0985^{+0.0097}_{-0.0093}$	$100\theta_D$	0.16099	$0.1612^{+0.0012}_{-0.0012}$
$\tau$	0.0754	$0.085^{+0.039}_{-0.037}$	$\sigma_8$	0.8415	$0.829^{+0.042}_{-0.047}$	$z_{\text{eq}}$	3388	$3358^{+81}_{-81}$
$\Sigma m_\nu [\text{eV}]$	0.004	$< 0.266$	$\sigma_8 \Omega_m^{0.5}$	0.4664	$0.461^{+0.022}_{-0.024}$	$k_{\text{eq}}$	0.010357	$0.01034^{+0.00029}_{-0.00030}$
$N_{\text{eff}}$	3.069	$3.18^{+0.50}_{-0.49}$	$\sigma_8 \Omega_m^{0.25}$	0.6265	$0.618^{+0.030}_{-0.033}$	$100\theta_{\text{eq}}$	0.8155	$0.821^{+0.016}_{-0.016}$
$\ln(10^{10} A_s)$	3.086	$3.106^{+0.084}_{-0.080}$	$\sigma_8/h^{0.5}$	1.0200	$1.003^{+0.047}_{-0.051}$	$100\theta_{\text{s,eq}}$	0.4506	$0.4536^{+0.0081}_{-0.0079}$
$n_s$	0.9671	$0.973^{+0.021}_{-0.019}$	$\langle d^2 \rangle^{1/2}$	2.497	$2.484^{+0.084}_{-0.089}$	$r_{\text{drag}}/D_V(0.57)$	0.07180	$0.07171^{+0.00095}_{-0.00095}$
$y_{\text{cal}}$	1.00041	$1.0005^{+0.0049}_{-0.0049}$	$z_{\text{re}}$	9.74	$10.5^{+3.3}_{-3.5}$	$H(0.57)$	93.36	$93.8^{+3.2}_{-3.3}$
$A_{217}^{\text{CIB}}$	66.5	$65^{+10}_{-10}$	$10^9 A_s$	2.189	$2.23^{+0.19}_{-0.19}$	$D_A(0.57)$	1381	$1375^{+55}_{-51}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.06	—	$10^9 A_s e^{-2\tau}$	1.8824	$1.885^{+0.043}_{-0.042}$	$F_{\text{AP}}(0.57)$	0.67494	$0.6754^{+0.0046}_{-0.0044}$
$A_{143}^{\text{tSZ}}$	7.06	$5.0^{+3.9}_{-3.9}$	$D_{40}$	1233.6	$1229^{+33}_{-32}$	$f\sigma_8(0.57)$	0.4870	$0.482^{+0.022}_{-0.024}$
$A_{100}^{\text{PS}}$	253	$260^{+60}_{-50}$	$D_{220}$	5718	$5720^{+81}_{-80}$	$\sigma_8(0.57)$	0.6266	$0.618^{+0.033}_{-0.036}$
$A_{143}^{\text{PS}}$	39.5	$45^{+20}_{-20}$	$D_{810}$	2535.6	$2535^{+28}_{-28}$	$f_{2000}^{143}$	29.4	$31^{+7}_{-7}$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$D_{1420}$	815.0	$814^{+10}_{-10}$	$f_{2000}^{143 \times 217}$	32.17	$33^{+5}_{-5}$
$A_{217}^{\text{PS}}$	98.2	$97^{+20}_{-20}$	$D_{2000}$	230.52	$229.8^{+4.4}_{-4.5}$	$f_{2000}^{217}$	105.88	$106.5^{+4.6}_{-4.7}$
$A^{\text{kSZ}}$	0.0	—	$n_{\text{s},0.002}$	0.9671	$0.973^{+0.021}_{-0.019}$	$\chi_{\text{lowTEB}}^2$	10496.09	$10496.9 (\nu: 3.4)$
$A_{100}^{\text{dustTT}}$	7.48	$7.5^{+3.7}_{-3.6}$	$Y_{\text{P}}$	0.2457	$0.2472^{+0.0066}_{-0.0068}$	$\chi_{\text{plik}}^2$	763.5	$778.6 (\nu: 18.5)$
$A_{143}^{\text{dustTT}}$	9.07	$9.0^{+3.6}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.2470	$0.2485^{+0.0066}_{-0.0068}$	$\chi_{6\text{DF}}^2$	0.006	$0.069 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.1^{+8.3}_{-8.2}$	$10^5 D/H$	2.619	$2.64^{+0.14}_{-0.13}$	$\chi_{\text{MGS}}^2$	1.47	$1.43 (\nu: 0.2)$
$A_{217}^{\text{dustTT}}$	82.3	$82^{+10}_{-10}$	$\text{Age/Gyr}$	13.756	$13.69^{+0.47}_{-0.44}$	$\chi_{\text{DR11CMass}}^2$	2.41	$3.01 (\nu: 0.4)$
$c_{100}$	0.99794	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1090.06	$1090.12^{+0.95}_{-0.97}$	$\chi_{\text{DR11LOWZ}}^2$	0.43	$0.73 (\nu: 0.2)$
$c_{217}$	0.99595	$0.9960^{+0.0029}_{-0.0029}$	$r_*$	144.41	$143.6^{+4.6}_{-4.4}$	$\chi_{\text{prior}}^2$	2.0	$7.4 (\nu: 6.2)$
$H_0$	68.05	$68.3^{+3.0}_{-3.0}$	$100\theta_*$	1.04105	$1.0409^{+0.0014}_{-0.0013}$	$\chi_{\text{CMB}}^2$	11259.6	$11275.5 (\nu: 16.3)$
$\Omega_\Lambda$	0.6928	$0.691^{+0.017}_{-0.018}$	$D_A/\text{Gpc}$	13.871	$13.80^{+0.43}_{-0.41}$	$\chi_{\text{BAO}}^2$	4.32	$5.2 (\nu: 0.8)$
$\Omega_m$	0.3072	$0.309^{+0.018}_{-0.017}$	$z_{\text{drag}}$	1059.70	$1060.1^{+1.8}_{-1.9}$			

Best-fit  $\chi_{\text{eff}}^2 = 11265.87$ ;  $\bar{\chi}_{\text{eff}}^2 = 11288.16$ ;  $R - 1 = 0.01565$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMass: 2.41 DR11LOWZ: 0.43 CMB - lowl.SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10496.09 plik\_dx11dr2\_HM\_v18.TT: 763.49

### 14.3 base\_nnu\_mnu\_plikHM\_TT\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02240	$0.02241^{+0.00061}_{-0.00059}$	$\Omega_m$	0.2997	$0.311^{+0.044}_{-0.041}$	$D_A/\text{Gpc}$	13.788	$13.74^{+0.41}_{-0.40}$
$\Omega_c h^2$	0.1209	$0.1216^{+0.0073}_{-0.0071}$	$\Omega_m h^2$	0.1433	$0.1454^{+0.0087}_{-0.0079}$	$z_{\text{drag}}$	1060.16	$1060.3^{+2.0}_{-2.0}$
$100\theta_{\text{MC}}$	1.04085	$1.0407^{+0.0011}_{-0.0011}$	$\Omega_\nu h^2$	0.00001	$< 0.00400$	$r_{\text{drag}}$	146.16	$145.7^{+4.5}_{-4.5}$
$\tau$	0.0820	$0.087^{+0.042}_{-0.040}$	$\Omega_m h^3$	0.0991	$0.0997^{+0.010}_{-0.0095}$	$k_D$	0.14135	$0.1417^{+0.0034}_{-0.0033}$
$\Sigma m_\nu [\text{eV}]$	0.001	$< 0.372$	$\sigma_8$	0.849	$0.827^{+0.058}_{-0.064}$	$100\theta_D$	0.16119	$0.1614^{+0.0011}_{-0.0011}$
$N_{\text{eff}}$	3.18	$3.25^{+0.51}_{-0.49}$	$\sigma_8 \Omega_m^{0.5}$	0.4647	$0.460^{+0.026}_{-0.026}$	$z_{\text{eq}}$	3362	$3352^{+120}_{-120}$
$\ln(10^{10} A_s)$	3.101	$3.112^{+0.088}_{-0.085}$	$\sigma_8 \Omega_m^{0.25}$	0.6281	$0.617^{+0.034}_{-0.036}$	$k_{\text{eq}}$	0.010355	$0.01037^{+0.00031}_{-0.00030}$
$n_s$	0.9730	$0.975^{+0.024}_{-0.024}$	$\sigma_8/h^{0.5}$	1.021	$0.999^{+0.053}_{-0.059}$	$100\theta_{\text{eq}}$	0.8206	$0.823^{+0.024}_{-0.022}$
$y_{\text{cal}}$	1.00024	$1.0005^{+0.0049}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.493	$2.482^{+0.089}_{-0.092}$	$100\theta_{s,\text{eq}}$	0.4532	$0.454^{+0.012}_{-0.011}$
$A_{217}^{\text{CIB}}$	67.4	$65^{+10}_{-10}$	$z_{\text{re}}$	10.33	$10.7^{+3.5}_{-3.8}$	$r_{\text{drag}}/D_V(0.57)$	0.07221	$0.0717^{+0.0023}_{-0.0024}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.222	$2.25^{+0.21}_{-0.19}$	$H(0.57)$	94.31	$94.2^{+4.0}_{-3.8}$
$A_{143}^{\text{tSZ}}$	7.19	$4.9^{+3.9}_{-3.9}$	$10^9 A_s e^{-2\tau}$	1.8861	$1.889^{+0.039}_{-0.040}$	$D_A(0.57)$	1363	$1371^{+76}_{-71}$
$A_{100}^{\text{PS}}$	254	$262^{+60}_{-50}$	$D_{40}$	1226.7	$1226^{+36}_{-37}$	$F_{\text{AP}}(0.57)$	0.6730	$0.676^{+0.011}_{-0.010}$
$A_{143}^{\text{PS}}$	39.1	$46^{+20}_{-20}$	$D_{220}$	5718	$5720^{+81}_{-79}$	$f\sigma_8(0.57)$	0.4892	$0.481^{+0.026}_{-0.028}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{810}$	2535.2	$2537^{+28}_{-28}$	$\sigma_8(0.57)$	0.634	$0.616^{+0.050}_{-0.054}$
$A_{217}^{\text{PS}}$	97.3	$97^{+20}_{-20}$	$D_{1420}$	814.3	$814^{+10}_{-10}$	$f_{2000}^{143}$	29.9	$31^{+7}_{-7}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.07	$229.5^{+4.3}_{-4.4}$	$f_{2000}^{143 \times 217}$	32.57	$33^{+5}_{-5}$
$A_{100}^{\text{dustTT}}$	7.38	$7.5^{+3.7}_{-3.6}$	$n_{s,0.002}$	0.9730	$0.975^{+0.024}_{-0.024}$	$f_{2000}^{217}$	106.19	$106.9^{+4.7}_{-4.5}$
$A_{143}^{\text{dustTT}}$	9.07	$9.1^{+3.6}_{-3.6}$	$Y_P$	0.2472	$0.2481^{+0.0067}_{-0.0068}$	$\chi_{\text{lowTEB}}^2$	10495.8	$10496.9 (\nu: 3.8)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.2}_{-8.1}$	$Y_P^{\text{BBN}}$	0.2486	$0.2494^{+0.0067}_{-0.0068}$	$\chi_{\text{plik}}^2$	763.8	$779.4 (\nu: 19.6)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	2.632	$2.65^{+0.13}_{-0.13}$	$\chi_{\text{H070p6}}^2$	0.19	$0.9 (\nu: 0.7)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.63	$13.64^{+0.52}_{-0.50}$	$\chi_{\text{prior}}^2$	2.1	$7.4 (\nu: 6.4)$
$c_{217}$	0.99598	$0.9960^{+0.0028}_{-0.0028}$	$z_*$	1090.08	$1090.2^{+1.0}_{-0.98}$	$\chi_{\text{CMB}}^2$	11259.6	$11276.2 (\nu: 17.3)$
$H_0$	69.14	$68.5^{+4.6}_{-4.7}$	$r_*$	143.52	$143.0^{+4.4}_{-4.3}$			
$\Omega_\Lambda$	0.7003	$0.689^{+0.041}_{-0.044}$	$100\theta_*$	1.04091	$1.0408^{+0.0013}_{-0.0013}$			

Best-fit  $\chi_{\text{eff}}^2 = 11261.82$ ;  $\bar{\chi}_{\text{eff}}^2 = 11284.53$ ;  $R - 1 = 0.01064$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.80 plik\_dx11dr2\_HM\_v18\_TT: 763.76 Hubble - H070p6: 0.19

#### 14.4 base\_nnu\_mnu\_plikHM\_TT\_lowTEB\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022356	$0.02242^{+0.00046}_{-0.00047}$	$\Omega_\nu h^2$	0.00001	$< 0.00286$	$100\theta_D$	0.16106	$0.1614^{+0.0011}_{-0.0011}$
$\Omega_c h^2$	0.1208	$0.1215^{+0.0074}_{-0.0072}$	$\Omega_m h^3$	0.0981	$0.0998^{+0.0089}_{-0.0085}$	$z_{\text{eq}}$	3383	$3350^{+72}_{-80}$
$100\theta_{\text{MC}}$	1.04076	$1.0407^{+0.0011}_{-0.0011}$	$\sigma_8$	0.8472	$0.832^{+0.041}_{-0.046}$	$k_{\text{eq}}$	0.010383	$0.01036^{+0.00028}_{-0.00028}$
$\tau$	0.0797	$0.086^{+0.039}_{-0.037}$	$\sigma_8 \Omega_m^{0.5}$	0.4679	$0.461^{+0.022}_{-0.024}$	$100\theta_{\text{eq}}$	0.8167	$0.823^{+0.015}_{-0.015}$
$\Sigma m_\nu [\text{eV}]$	0.001	$< 0.266$	$\sigma_8 \Omega_m^{0.25}$	0.6296	$0.619^{+0.029}_{-0.033}$	$100\theta_{\text{s,eq}}$	0.4512	$0.4544^{+0.0078}_{-0.0076}$
$N_{\text{eff}}$	3.132	$3.24^{+0.47}_{-0.44}$	$\sigma_8/h^{0.5}$	1.0235	$1.004^{+0.047}_{-0.051}$	$r_{\text{drag}}/D_V(0.57)$	0.07190	$0.07184^{+0.00088}_{-0.00088}$
$\ln(10^{10} A_s)$	3.096	$3.111^{+0.083}_{-0.080}$	$\langle d^2 \rangle^{1/2}$	2.504	$2.482^{+0.084}_{-0.089}$	$H(0.57)$	93.84	$94.3^{+2.9}_{-2.9}$
$n_s$	0.9690	$0.975^{+0.019}_{-0.017}$	$z_{\text{re}}$	10.13	$10.7^{+3.3}_{-3.5}$	$D_A(0.57)$	1372.4	$1367^{+48}_{-46}$
$y_{\text{cal}}$	1.00039	$1.0005^{+0.0049}_{-0.0049}$	$10^9 A_s$	2.212	$2.25^{+0.19}_{-0.17}$	$F_{\text{AP}}(0.57)$	0.67440	$0.6748^{+0.0042}_{-0.0040}$
$A_{217}^{\text{CIB}}$	67.6	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8861	$1.889^{+0.038}_{-0.040}$	$f\sigma_8(0.57)$	0.4897	$0.483^{+0.022}_{-0.024}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1233.6	$1226^{+31}_{-31}$	$\sigma_8(0.57)$	0.6314	$0.621^{+0.032}_{-0.035}$
$A_{143}^{\text{tSZ}}$	7.22	$4.9^{+3.9}_{-3.9}$	$D_{220}$	5722	$5721^{+80}_{-81}$	$f_{2000}^{143}$	30.0	$31^{+6}_{-6}$
$A_{100}^{\text{PS}}$	254	$262^{+60}_{-50}$	$D_{810}$	2535.1	$2537^{+28}_{-28}$	$f_{2000}^{143 \times 217}$	32.59	$33^{+5}_{-5}$
$A_{143}^{\text{PS}}$	39.1	$45^{+20}_{-20}$	$D_{1420}$	814.2	$814^{+10}_{-10}$	$f_{2000}^{217}$	106.17	$106.8^{+4.6}_{-4.4}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{2000}$	230.16	$229.6^{+4.3}_{-4.4}$	$\chi_{\text{lowTEB}}^2$	10496.32	$10496.6 (\nu: 3.4)$
$A_{217}^{\text{PS}}$	97.0	$97^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9690	$0.975^{+0.019}_{-0.017}$	$\chi_{\text{plik}}^2$	763.2	$778.9 (\nu: 18.8)$
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.2466	$0.2480^{+0.0061}_{-0.0061}$	$\chi_{\text{H070p6}}^2$	0.40	$0.47 (\nu: 0.1)$
$A_{100}^{\text{dustTT}}$	7.45	$7.5^{+3.6}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.2479	$0.2494^{+0.0061}_{-0.0061}$	$\chi_{\text{JLA}}^2$	706.596	$706.68 (\nu: 0.0)$
$A_{143}^{\text{dustTT}}$	9.18	$9.1^{+3.6}_{-3.6}$	$10^5 \text{D/H}$	2.624	$2.65^{+0.13}_{-0.13}$	$\chi_{6\text{DF}}^2$	0.001	$0.050 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.3}_{-8.1}$	$\text{Age/Gyr}$	13.690	$13.62^{+0.42}_{-0.40}$	$\chi_{\text{MGS}}^2$	1.61	$1.59 (\nu: 0.2)$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$z_*$	1090.09	$1090.18^{+0.92}_{-0.93}$	$\chi_{\text{DR11CMass}}^2$	2.45	$2.93 (\nu: 0.3)$
$c_{100}$	0.99790	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	143.81	$143.1^{+4.2}_{-4.1}$	$\chi_{\text{DR11LOWZ}}^2$	0.33	$0.55 (\nu: 0.1)$
$c_{217}$	0.99596	$0.9960^{+0.0028}_{-0.0029}$	$100\theta_*$	1.04086	$1.0408^{+0.0013}_{-0.0013}$	$\chi_{\text{prior}}^2$	2.2	$7.4 (\nu: 6.2)$
$H_0$	68.51	$68.8^{+2.7}_{-2.6}$	$D_A/\text{Gpc}$	13.816	$13.75^{+0.39}_{-0.38}$	$\chi_{\text{CMB}}^2$	11259.5	$11275.6 (\nu: 16.6)$
$\Omega_\Lambda$	0.6949	$0.693^{+0.016}_{-0.017}$	$z_{\text{drag}}$	1060.05	$1060.3^{+1.7}_{-1.7}$	$\chi_{\text{BAO}}^2$	4.39	$5.1 (\nu: 0.6)$
$\Omega_m$	0.3051	$0.307^{+0.017}_{-0.016}$	$r_{\text{drag}}$	146.46	$145.7^{+4.4}_{-4.2}$			
$\Omega_m h^2$	0.1432	$0.1450^{+0.0083}_{-0.0078}$	$k_D$	0.14118	$0.1417^{+0.0032}_{-0.0032}$			

Best-fit  $\chi_{\text{eff}}^2 = 11973.06$ ;  $\bar{\chi}_{\text{eff}}^2 = 11995.28$ ;  $R - 1 = 0.01765$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMass: 2.45 DR11LOWZ: 0.33 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.32 plik\_dx11dr2\_HM\_v18\_TT: 763.21  
Hubble - H070p6: 0.40 SN - JLA December\_2013: 706.60

## 14.5 base\_nnu\_mnu\_plikHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022199	$0.02215^{+0.00049}_{-0.00050}$	$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.057}_{-0.058}$	$Y_P^{\text{BBN}}$	0.2451	$0.2456^{+0.0056}_{-0.0057}$
$\Omega_c h^2$	0.1181	$0.1191^{+0.0062}_{-0.0059}$	$A_{100 \times 217}^{\text{dust}TE}$	0.300	$0.30^{+0.17}_{-0.17}$	$10^5 D/H$	2.584	$2.608^{+0.096}_{-0.091}$
$100\theta_{\text{MC}}$	1.04100	$1.04081^{+0.00089}_{-0.00088}$	$A_{143}^{\text{dust}TE}$	0.155	$0.16^{+0.11}_{-0.11}$	Age/Gyr	13.894	$13.95^{+0.50}_{-0.44}$
$\tau$	0.0757	$0.081^{+0.036}_{-0.036}$	$A_{143 \times 217}^{\text{dust}TE}$	0.339	$0.34^{+0.16}_{-0.16}$	$z_*$	1089.85	$1090.07^{+0.78}_{-0.73}$
$\Sigma m_\nu$ [eV]	0.001	< 0.494	$A_{217}^{\text{dust}TE}$	1.67	$1.68^{+0.50}_{-0.50}$	$r_*$	145.64	$145.2^{+3.8}_{-3.7}$
$N_{\text{eff}}$	2.934	$2.98^{+0.40}_{-0.39}$	$c_{100}$	0.99822	$0.9982^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04124	$1.0411^{+0.0011}_{-0.0011}$
$\ln(10^{10} A_s)$	3.082	$3.095^{+0.074}_{-0.075}$	$c_{217}$	0.99583	$0.9960^{+0.0029}_{-0.0029}$	$D_A/\text{Gpc}$	13.987	$13.95^{+0.35}_{-0.34}$
$n_s$	0.9612	$0.961^{+0.019}_{-0.020}$	$H_0$	67.12	$65.8^{+4.4}_{-4.9}$	$z_{\text{drag}}$	1059.32	$1059.3^{+1.7}_{-1.7}$
$y_{\text{cal}}$	1.00026	$1.0004^{+0.0048}_{-0.0050}$	$\Omega_\Lambda$	0.6886	$0.668^{+0.043}_{-0.055}$	$r_{\text{drag}}$	148.38	$147.9^{+3.9}_{-3.9}$
$A_{217}^{\text{CIB}}$	63.4	$64^{+10}_{-10}$	$\Omega_m$	0.3114	$0.332^{+0.055}_{-0.043}$	$k_D$	0.13982	$0.1401^{+0.0028}_{-0.0028}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.42	—	$\Omega_m h^2$	0.1403	$0.1430^{+0.0075}_{-0.0073}$	$100\theta_D$	0.16064	$0.16079^{+0.00085}_{-0.00084}$
$A_{143}^{\text{tSZ}}$	6.97	$5.4^{+3.6}_{-3.8}$	$\Omega_\nu h^2$	0.00001	< 0.00531	$z_{\text{eq}}$	3403	$3408^{+82}_{-79}$
$A_{100}^{\text{PS}}$	251	$259^{+50}_{-50}$	$\Omega_m h^3$	0.0941	$0.0941^{+0.0083}_{-0.0081}$	$k_{\text{eq}}$	0.010308	$0.01035^{+0.00025}_{-0.00024}$
$A_{143}^{\text{PS}}$	43.2	$43^{+20}_{-20}$	$\sigma_8$	0.837	$0.807^{+0.066}_{-0.082}$	$100\theta_{\text{eq}}$	0.8126	$0.812^{+0.015}_{-0.015}$
$A_{143 \times 217}^{\text{PS}}$	44.0	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4668	$0.464^{+0.021}_{-0.022}$	$100\theta_{\text{s,eq}}$	0.4491	$0.4488^{+0.0078}_{-0.0077}$
$A_{217}^{\text{PS}}$	102.6	$98^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6249	$0.612^{+0.037}_{-0.042}$	$r_{\text{drag}}/D_V(0.57)$	0.07159	$0.0706^{+0.0021}_{-0.0026}$
$A^{\text{kSZ}}$	0.00	< 7.81	$\sigma_8/h^{0.5}$	1.021	$0.995^{+0.059}_{-0.072}$	$H(0.57)$	92.37	$91.8^{+3.3}_{-3.6}$
$A_{100}^{\text{dust}TT}$	7.31	$7.4^{+3.7}_{-3.7}$	$\langle d^2 \rangle^{1/2}$	2.511	$2.509^{+0.079}_{-0.080}$	$D_A(0.57)$	1397	$1417^{+81}_{-72}$
$A_{143}^{\text{dust}TT}$	8.98	$8.9^{+3.6}_{-3.6}$	$z_{\text{re}}$	9.73	$10.2^{+3.3}_{-3.4}$	$F_{\text{AP}}(0.57)$	0.6760	$0.681^{+0.013}_{-0.011}$
$A_{143 \times 217}^{\text{dust}TT}$	17.9	$17.0^{+8.1}_{-8.2}$	$10^9 A_s$	2.181	$2.21^{+0.17}_{-0.16}$	$f\sigma_8(0.57)$	0.4853	$0.475^{+0.029}_{-0.035}$
$A_{217}^{\text{dust}TT}$	82.5	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8742	$1.878^{+0.036}_{-0.036}$	$\sigma_8(0.57)$	0.622	$0.597^{+0.055}_{-0.070}$
$A_{100}^{\text{dust}EE}$	0.0810	$0.081^{+0.011}_{-0.011}$	$D_{40}$	1243.5	$1246^{+33}_{-32}$	$f_{2000}^{143}$	28.0	$29^{+6}_{-6}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0486	$0.0485^{+0.0098}_{-0.0097}$	$D_{220}$	5729	$5728^{+75}_{-77}$	$f_{2000}^{143 \times 217}$	31.30	$32^{+4}_{-4}$
$A_{100 \times 217}^{\text{dust}EE}$	0.0997	$0.0999^{+0.064}_{-0.064}$	$D_{810}$	2534.7	$2535^{+27}_{-27}$	$f_{2000}^{217}$	104.88	$105.8^{+4.1}_{-4.0}$
$A_{143}^{\text{dust}EE}$	0.0999	$0.0999^{+0.014}_{-0.013}$	$D_{1420}$	815.8	$815.1^{+9.5}_{-9.6}$	$\chi_{\text{lowTEB}}^2$	10497.4	$10498.5 (\nu: 3.4)$
$A_{143 \times 217}^{\text{dust}EE}$	0.226	$0.225^{+0.092}_{-0.091}$	$D_{2000}$	231.32	$230.6^{+3.6}_{-3.7}$	$\chi_{\text{plik}}^2$	2430.8	$2451.9 (\nu: 25.7)$
$A_{217}^{\text{dust}EE}$	0.649	$0.65^{+0.26}_{-0.25}$	$n_{s,0.002}$	0.9612	$0.961^{+0.019}_{-0.020}$	$\chi_{\text{prior}}^2$	6.5	$19.2 (\nu: 15.1)$
$A_{100}^{\text{dust}TE}$	0.142	$0.141^{+0.075}_{-0.074}$	$Y_P$	0.2438	$0.2443^{+0.0056}_{-0.0057}$	$\chi_{\text{CMB}}^2$	12928.2	$12950.5 (\nu: 25.1)$

Best-fit  $\chi_{\text{eff}}^2 = 12934.70$ ;  $\bar{\chi}_{\text{eff}}^2 = 12969.63$ ;  $R - 1 = 0.00644$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10497.35 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2430.85

## 14.6 base\_nnu\_mnu\_plikHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022225	$0.02229^{+0.00038}_{-0.00037}$	$A_{143}^{\text{dust}TE}$	0.154	$0.15^{+0.11}_{-0.10}$	$r_*$	145.43	$144.7^{+3.4}_{-3.5}$
$\Omega_c h^2$	0.1183	$0.1192^{+0.0062}_{-0.0057}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04120	$1.0411^{+0.0010}_{-0.0010}$
$100\theta_{\text{MC}}$	1.04097	$1.04085^{+0.00083}_{-0.00084}$	$A_{217}^{\text{dust}TE}$	1.66	$1.67^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	13.967	$13.90^{+0.32}_{-0.32}$
$\tau$	0.0794	$0.084^{+0.033}_{-0.034}$	$c_{100}$	0.99824	$0.9982^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.40	$1059.7^{+1.4}_{-1.4}$
$\Sigma m_\nu [\text{eV}]$	0.003	$< 0.178$	$c_{217}$	0.99579	$0.9959^{+0.0029}_{-0.0028}$	$r_{\text{drag}}$	148.15	$147.4^{+3.6}_{-3.6}$
$N_{\text{eff}}$	2.959	$3.04^{+0.37}_{-0.34}$	$H_0$	67.34	$67.5^{+2.3}_{-2.3}$	$k_D$	0.13997	$0.1405^{+0.0027}_{-0.0026}$
$\ln(10^{10} A_s)$	3.090	$3.101^{+0.069}_{-0.072}$	$\Omega_\Lambda$	0.6900	$0.688^{+0.015}_{-0.016}$	$100\theta_D$	0.16069	$0.16087^{+0.00082}_{-0.00077}$
$n_s$	0.9629	$0.966^{+0.015}_{-0.015}$	$\Omega_m$	0.3100	$0.312^{+0.016}_{-0.015}$	$z_{\text{eq}}$	3398	$3382^{+55}_{-56}$
$y_{\text{cal}}$	1.00003	$1.0004^{+0.0049}_{-0.0050}$	$\Omega_m h^2$	0.1406	$0.1422^{+0.0065}_{-0.0061}$	$k_{\text{eq}}$	0.010310	$0.01032^{+0.00023}_{-0.00023}$
$A_{217}^{\text{CIB}}$	62.7	$63^{+10}_{-10}$	$\Omega_\nu h^2$	0.00003	$< 0.00192$	$100\theta_{\text{eq}}$	0.8136	$0.817^{+0.011}_{-0.010}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.50	—	$\Omega_m h^3$	0.0947	$0.0960^{+0.0072}_{-0.0067}$	$100\theta_{\text{s,eq}}$	0.4496	$0.4512^{+0.0055}_{-0.0053}$
$A_{143}^{\text{tSZ}}$	6.92	$5.4^{+3.5}_{-3.7}$	$\sigma_8$	0.8401	$0.832^{+0.037}_{-0.038}$	$r_{\text{drag}}/D_V(0.57)$	0.07166	$0.07155^{+0.00080}_{-0.00081}$
$A_{100}^{\text{PS}}$	249	$259^{+60}_{-60}$	$\sigma_8 \Omega_m^{0.5}$	0.4677	$0.465^{+0.019}_{-0.019}$	$H(0.57)$	92.58	$92.9^{+2.5}_{-2.4}$
$A_{143}^{\text{PS}}$	44.6	$43^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6268	$0.622^{+0.025}_{-0.026}$	$D_A(0.57)$	1393.6	$1389^{+42}_{-41}$
$A_{143 \times 217}^{\text{PS}}$	46.5	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0237	$1.013^{+0.037}_{-0.040}$	$F_{\text{AP}}(0.57)$	0.67564	$0.6762^{+0.0040}_{-0.0038}$
$A_{217}^{\text{PS}}$	103.6	$98^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.515	$2.505^{+0.077}_{-0.078}$	$f\sigma_8(0.57)$	0.4869	$0.484^{+0.019}_{-0.020}$
$A^{\text{kSZ}}$	0.00	$< 7.75$	$z_{\text{re}}$	10.07	$10.4^{+3.0}_{-3.2}$	$\sigma_8(0.57)$	0.6249	$0.619^{+0.029}_{-0.030}$
$A_{100}^{\text{dust}TT}$	7.30	$7.4^{+3.6}_{-3.7}$	$10^9 A_s$	2.198	$2.22^{+0.16}_{-0.16}$	$f_{2000}^{143}$	27.9	$29^{+6}_{-6}$
$A_{143}^{\text{dust}TT}$	8.95	$8.9^{+3.5}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8749	$1.879^{+0.035}_{-0.035}$	$f_{2000}^{143 \times 217}$	31.25	$32^{+4}_{-4}$
$A_{143 \times 217}^{\text{dust}TT}$	18.0	$17.0^{+8.2}_{-8.3}$	$D_{40}$	1241.6	$1240^{+28}_{-28}$	$f_{2000}^{217}$	104.70	$105.6^{+4.1}_{-3.8}$
$A_{217}^{\text{dust}TT}$	82.7	$82^{+10}_{-10}$	$D_{220}$	5725	$5730^{+75}_{-77}$	$\chi_{\text{lowTEB}}^2$	10497.43	$10498.0 (\nu: 3.1)$
$A_{100}^{\text{dust}EE}$	0.0810	$0.081^{+0.011}_{-0.011}$	$D_{810}$	2534.1	$2535^{+27}_{-28}$	$\chi_{\text{plik}}^2$	2430.9	$2451.1 (\nu: 29.9)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0486	$0.0490^{+0.0098}_{-0.0096}$	$D_{1420}$	815.6	$815.0^{+9.3}_{-9.7}$	$\chi_{6\text{DF}}^2$	0.022	$0.079 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.0998	$0.099^{+0.065}_{-0.064}$	$D_{2000}$	231.25	$230.7^{+3.5}_{-3.6}$	$\chi_{\text{MGS}}^2$	1.28	$1.21 (\nu: 0.1)$
$A_{143}^{\text{dust}EE}$	0.0999	$0.100^{+0.013}_{-0.013}$	$n_{\text{s},0.002}$	0.9629	$0.966^{+0.015}_{-0.015}$	$\chi_{\text{DR11CMass}}^2$	2.45	$2.98 (\nu: 0.3)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.224^{+0.090}_{-0.091}$	$Y_{\text{P}}$	0.24414	$0.2453^{+0.0050}_{-0.0049}$	$\chi_{\text{DR11LOWZ}}^2$	0.61	$0.91 (\nu: 0.2)$
$A_{217}^{\text{dust}EE}$	0.652	$0.65^{+0.26}_{-0.25}$	$Y_{\text{P}}^{\text{BBN}}$	0.24547	$0.2466^{+0.0050}_{-0.0049}$	$\chi_{\text{prior}}^2$	6.4	$19.3 (\nu: 15.2)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.074}_{-0.074}$	$10^5 \text{D}/\text{H}$	2.588	$2.605^{+0.093}_{-0.088}$	$\chi_{\text{CMB}}^2$	12928.3	$12949.1 (\nu: 28.2)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.056}_{-0.057}$	$\text{Age}/\text{Gyr}$	13.866	$13.81^{+0.35}_{-0.35}$	$\chi_{\text{BAO}}^2$	4.36	$5.2 (\nu: 0.7)$
$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.16}_{-0.17}$	$z_*$	1089.86	$1089.94^{+0.70}_{-0.67}$			

Best-fit  $\chi_{\text{eff}}^2 = 12939.09$ ;  $\bar{\chi}_{\text{eff}}^2 = 12973.53$ ;  $R - 1 = 0.01571$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.02 MGS: 1.28 DR11CMass: 2.45 DR11LOWZ: 0.61 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10497.43 plik\_dx11dr2\_HM\_v18\_TTTEEE:



## 14.7 base\_nnu\_mnu\_plikHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022294	$0.02228^{+0.00044}_{-0.00044}$	$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.16}_{-0.17}$	Age/Gyr	13.753	$13.81^{+0.39}_{-0.38}$
$\Omega_c h^2$	0.1200	$0.1200^{+0.0060}_{-0.0057}$	$A_{143}^{\text{dust}TE}$	0.154	$0.16^{+0.11}_{-0.10}$	$z_*$	1090.03	$1090.06^{+0.73}_{-0.70}$
$100\theta_{\text{MC}}$	1.04080	$1.04075^{+0.00084}_{-0.00084}$	$A_{143 \times 217}^{\text{dust}TE}$	0.340	$0.34^{+0.16}_{-0.16}$	$r_*$	144.37	$144.4^{+3.4}_{-3.4}$
$\tau$	0.0769	$0.084^{+0.035}_{-0.036}$	$A_{217}^{\text{dust}TE}$	1.67	$1.67^{+0.50}_{-0.50}$	$100\theta_*$	1.04093	$1.0409^{+0.0010}_{-0.0010}$
$\Sigma m_\nu$ [eV]	0.001	$< 0.294$	$c_{100}$	0.99816	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.869	$13.87^{+0.32}_{-0.32}$
$N_{\text{eff}}$	3.072	$3.07^{+0.37}_{-0.36}$	$c_{217}$	0.99601	$0.9960^{+0.0029}_{-0.0028}$	$z_{\text{drag}}$	1059.78	$1059.7^{+1.5}_{-1.5}$
$\ln(10^{10} A_s)$	3.089	$3.102^{+0.071}_{-0.074}$	$H_0$	68.07	$67.2^{+3.1}_{-3.4}$	$r_{\text{drag}}$	147.06	$147.1^{+3.6}_{-3.6}$
$n_s$	0.9660	$0.966^{+0.018}_{-0.017}$	$\Omega_\Lambda$	0.6929	$0.682^{+0.029}_{-0.033}$	$k_D$	0.14074	$0.1407^{+0.0026}_{-0.0026}$
$y_{\text{cal}}$	1.00041	$1.0004^{+0.0048}_{-0.0049}$	$\Omega_m$	0.3071	$0.318^{+0.033}_{-0.029}$	$100\theta_D$	0.16095	$0.16095^{+0.00082}_{-0.00078}$
$A_{217}^{\text{CIB}}$	67.1	$64^{+10}_{-10}$	$\Omega_m h^2$	0.1423	$0.1434^{+0.0069}_{-0.0062}$	$z_{\text{eq}}$	3388	$3388^{+73}_{-74}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.07	—	$\Omega_\nu h^2$	0.00001	$< 0.00316$	$k_{\text{eq}}$	0.010358	$0.01036^{+0.00024}_{-0.00024}$
$A_{143}^{\text{tSZ}}$	7.24	$5.3^{+3.5}_{-3.7}$	$\Omega_m h^3$	0.0968	$0.0964^{+0.0076}_{-0.0071}$	$100\theta_{\text{eq}}$	0.8155	$0.816^{+0.014}_{-0.014}$
$A_{100}^{\text{PS}}$	257	$260^{+50}_{-50}$	$\sigma_8$	0.843	$0.826^{+0.049}_{-0.053}$	$100\theta_{\text{s,eq}}$	0.4506	$0.4506^{+0.0073}_{-0.0070}$
$A_{143}^{\text{PS}}$	39.3	$43^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4669	$0.466^{+0.020}_{-0.020}$	$r_{\text{drag}}/D_V(0.57)$	0.07180	$0.0713^{+0.0015}_{-0.0017}$
$A_{143 \times 217}^{\text{PS}}$	34.5	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6272	$0.620^{+0.029}_{-0.030}$	$H(0.57)$	93.37	$92.9^{+2.8}_{-2.8}$
$A_{217}^{\text{PS}}$	97.6	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0213	$1.008^{+0.046}_{-0.049}$	$D_A(0.57)$	1380	$1393^{+57}_{-51}$
$A^{\text{kSZ}}$	0.00	$< 7.93$	$\langle d^2 \rangle^{1/2}$	2.504	$2.506^{+0.078}_{-0.079}$	$F_{\text{AP}}(0.57)$	0.6749	$0.6776^{+0.0082}_{-0.0073}$
$A_{100}^{\text{dust}TT}$	7.37	$7.4^{+3.6}_{-3.7}$	$z_{\text{re}}$	9.86	$10.4^{+3.2}_{-3.3}$	$f\sigma_8(0.57)$	0.4876	$0.483^{+0.023}_{-0.024}$
$A_{143}^{\text{dust}TT}$	9.01	$8.9^{+3.6}_{-3.6}$	$10^9 A_s$	2.196	$2.23^{+0.16}_{-0.16}$	$\sigma_8(0.57)$	0.6274	$0.614^{+0.040}_{-0.044}$
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.0^{+8.2}_{-8.3}$	$10^9 A_s e^{-2\tau}$	1.8834	$1.883^{+0.034}_{-0.035}$	$f_{2000}^{143}$	29.5	$30^{+6}_{-6}$
$A_{217}^{\text{dust}TT}$	81.8	$82^{+10}_{-10}$	$D_{40}$	1238.0	$1240^{+30}_{-30}$	$f_{2000}^{143 \times 217}$	32.31	$32^{+4}_{-4}$
$A_{100}^{\text{dust}EE}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5730	$5729^{+75}_{-76}$	$f_{2000}^{217}$	105.91	$105.8^{+4.1}_{-3.9}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0490	$0.0489^{+0.0099}_{-0.0096}$	$D_{810}$	2535.7	$2536^{+27}_{-27}$	$\chi_{\text{lowTEB}}^2$	10496.61	$10498.0 (\nu: 3.1)$
$A_{100 \times 217}^{\text{dust}EE}$	0.0998	$0.099^{+0.065}_{-0.064}$	$D_{1420}$	814.6	$814.8^{+9.5}_{-9.6}$	$\chi_{\text{plik}}^2$	2431.5	$2452 (\nu: 93.2)$
$A_{143}^{\text{dust}EE}$	0.1003	$0.100^{+0.013}_{-0.013}$	$D_{2000}$	230.37	$230.4^{+3.6}_{-3.6}$	$\chi_{\text{H070p6}}^2$	0.58	$1.3 (\nu: 0.6)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.224^{+0.091}_{-0.091}$	$n_{s,0.002}$	0.9660	$0.966^{+0.018}_{-0.017}$	$\chi_{\text{prior}}^2$	7.1	$19.3 (\nu: 17.4)$
$A_{217}^{\text{dust}EE}$	0.648	$0.65^{+0.26}_{-0.25}$	$Y_{\text{P}}$	0.2457	$0.2457^{+0.0051}_{-0.0051}$	$\chi_{\text{CMB}}^2$	12928.1	$12950 (\nu: 91.6)$
$A_{100}^{\text{dust}TE}$	0.141	$0.140^{+0.074}_{-0.074}$	$Y_{\text{P}}^{\text{BBN}}$	0.2470	$0.2470^{+0.0051}_{-0.0051}$			
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.131^{+0.057}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.615	$2.616^{+0.094}_{-0.089}$			

Best-fit  $\chi_{\text{eff}}^2 = 12935.77$ ;  $\bar{\chi}_{\text{eff}}^2 = 12970.52$ ;  $R - 1 = 0.01068$

$\chi^2_{\text{eff}}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.61 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.49 Hubble - H070p6: 0.58

# 14.8 base\_nnu\_mnu\_plikHM\_TTTEEE\_lowTEB\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022276	$0.02234^{+0.00037}_{-0.00037}$	$A_{143 \times 217}^{\text{dust}TE}$	0.338	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.937	$13.86^{+0.30}_{-0.31}$
$\Omega_c h^2$	0.1186	$0.1198^{+0.0060}_{-0.0056}$	$A_{217}^{\text{dust}TE}$	1.67	$1.66^{+0.50}_{-0.51}$	$z_{\text{drag}}$	1059.59	$1059.9^{+1.4}_{-1.4}$
$100\theta_{\text{MC}}$	1.04093	$1.04079^{+0.00081}_{-0.00083}$	$c_{100}$	0.99830	$0.9982^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.81	$146.9^{+3.4}_{-3.4}$
$\tau$	0.0817	$0.085^{+0.033}_{-0.034}$	$c_{217}$	0.99583	$0.9959^{+0.0029}_{-0.0028}$	$k_D$	0.14022	$0.1408^{+0.0025}_{-0.0025}$
$\Sigma m_\nu [\text{eV}]$	0.002	$< 0.170$	$H_0$	67.73	$67.9^{+2.2}_{-2.1}$	$100\theta_D$	0.16076	$0.16097^{+0.00081}_{-0.00075}$
$N_{\text{eff}}$	2.999	$3.10^{+0.35}_{-0.33}$	$\Omega_\Lambda$	0.6928	$0.690^{+0.014}_{-0.015}$	$z_{\text{eq}}$	3388	$3375^{+52}_{-54}$
$\ln(10^{10} A_s)$	3.096	$3.106^{+0.068}_{-0.071}$	$\Omega_m$	0.3072	$0.310^{+0.015}_{-0.014}$	$k_{\text{eq}}$	0.010308	$0.01034^{+0.00024}_{-0.00023}$
$n_s$	0.9649	$0.968^{+0.015}_{-0.014}$	$\Omega_m h^2$	0.1409	$0.1429^{+0.0064}_{-0.0060}$	$100\theta_{\text{eq}}$	0.8155	$0.818^{+0.011}_{-0.0099}$
$y_{\text{cal}}$	1.00028	$1.0004^{+0.0049}_{-0.0050}$	$\Omega_\nu h^2$	0.00002	$< 0.00182$	$100\theta_{s,\text{eq}}$	0.4506	$0.4519^{+0.0054}_{-0.0050}$
$A_{217}^{\text{CIB}}$	62.6	$64^{+10}_{-10}$	$\Omega_m h^3$	0.0954	$0.0971^{+0.0069}_{-0.0064}$	$r_{\text{drag}}/D_V(0.57)$	0.07181	$0.07167^{+0.00077}_{-0.00077}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.53	—	$\sigma_8$	0.8428	$0.836^{+0.036}_{-0.037}$	$H(0.57)$	92.91	$93.4^{+2.4}_{-2.3}$
$A_{143}^{\text{tSZ}}$	6.84	$5.4^{+3.5}_{-3.7}$	$\sigma_8 \Omega_m^{0.5}$	0.4671	$0.465^{+0.019}_{-0.019}$	$D_A(0.57)$	1387.1	$1382^{+39}_{-38}$
$A_{100}^{\text{PS}}$	251	$259^{+50}_{-60}$	$\sigma_8 \Omega_m^{0.25}$	0.6275	$0.624^{+0.025}_{-0.026}$	$F_{\text{AP}}(0.57)$	0.67494	$0.6756^{+0.0037}_{-0.0036}$
$A_{143}^{\text{PS}}$	45.4	$43^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0241	$1.014^{+0.036}_{-0.040}$	$f\sigma_8(0.57)$	0.4878	$0.486^{+0.019}_{-0.020}$
$A_{143 \times 217}^{\text{PS}}$	47.7	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.514	$2.504^{+0.077}_{-0.079}$	$\sigma_8(0.57)$	0.6276	$0.622^{+0.028}_{-0.029}$
$A_{217}^{\text{PS}}$	104.3	$98^{+20}_{-20}$	$z_{\text{re}}$	10.26	$10.6^{+3.0}_{-3.1}$	$f_{2000}^{143}$	28.0	$29^{+6}_{-6}$
$A^{\text{kSZ}}$	0.01	$< 7.82$	$10^9 A_s$	2.211	$2.23^{+0.16}_{-0.15}$	$f_{2000}^{143 \times 217}$	31.39	$32^{+4}_{-4}$
$A_{100}^{\text{dust}TT}$	7.33	$7.4^{+3.5}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8779	$1.882^{+0.034}_{-0.034}$	$f_{2000}^{217}$	104.90	$105.7^{+4.2}_{-3.9}$
$A_{143}^{\text{dust}TT}$	8.89	$8.9^{+3.5}_{-3.6}$	$D_{40}$	1240.3	$1238^{+28}_{-28}$	$\chi_{\text{lowTEB}}^2$	10497.34	$10497.8 (\nu: 3.1)$
$A_{143 \times 217}^{\text{dust}TT}$	18.0	$17.0^{+8.3}_{-8.3}$	$D_{220}$	5731	$5730^{+75}_{-78}$	$\chi_{\text{plik}}^2$	2431.1	$2451.4 (\nu: 25.4)$
$A_{217}^{\text{dust}TT}$	82.6	$82^{+10}_{-10}$	$D_{810}$	2536.0	$2536^{+27}_{-28}$	$\chi_{\text{H070p6}}^2$	0.75	$0.76 (\nu: 0.2)$
$A_{100}^{\text{dust}EE}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	816.0	$814.9^{+9.4}_{-9.6}$	$\chi_{\text{JLA}}^2$	706.639	$706.74 (\nu: 0.0)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0489	$0.0491^{+0.0097}_{-0.0096}$	$D_{2000}$	231.28	$230.5^{+3.6}_{-3.6}$	$\chi_{6\text{DF}}^2$	0.006	$0.054 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.099^{+0.065}_{-0.064}$	$n_{s,0.002}$	0.9649	$0.968^{+0.015}_{-0.014}$	$\chi_{\text{MGS}}^2$	1.47	$1.36 (\nu: 0.1)$
$A_{143}^{\text{dust}EE}$	0.1003	$0.101^{+0.013}_{-0.013}$	$Y_P$	0.24471	$0.2460^{+0.0047}_{-0.0046}$	$\chi_{\text{DR11CMass}}^2$	2.41	$2.83 (\nu: 0.2)$
$A_{143 \times 217}^{\text{dust}EE}$	0.225	$0.223^{+0.090}_{-0.091}$	$Y_P^{\text{BBN}}$	0.24603	$0.2474^{+0.0047}_{-0.0046}$	$\chi_{\text{DR11LOWZ}}^2$	0.43	$0.71 (\nu: 0.2)$
$A_{217}^{\text{dust}EE}$	0.650	$0.65^{+0.26}_{-0.27}$	$10^5 D/H$	2.593	$2.613^{+0.092}_{-0.087}$	$\chi_{\text{prior}}^2$	6.5	$19.3 (\nu: 15.2)$
$A_{100}^{\text{dust}TE}$	0.140	$0.140^{+0.074}_{-0.073}$	$\text{Age/Gyr}$	13.821	$13.75^{+0.33}_{-0.33}$	$\chi_{\text{CMB}}^2$	12928.4	$12949.2 (\nu: 23.4)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.056}_{-0.057}$	$z_*$	1089.86	$1089.98^{+0.70}_{-0.66}$	$\chi_{\text{BAO}}^2$	4.32	$4.95 (\nu: 0.4)$
$A_{100 \times 217}^{\text{dust}TE}$	0.304	$0.30^{+0.16}_{-0.16}$	$r_*$	145.11	$144.3^{+3.2}_{-3.3}$			
$A_{143}^{\text{dust}TE}$	0.154	$0.15^{+0.11}_{-0.10}$	$100\theta_*$	1.04113	$1.04095^{+0.00099}_{-0.0010}$			

Best-fit  $\chi_{\text{eff}}^2 = 13646.60$ ;  $\bar{\chi}_{\text{eff}}^2 = 13680.95$ ;  $R - 1 = 0.01983$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMASS: 2.41 DR11LOWZ: 0.43 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10497.34 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.10 Hubble - H070p6: 0.75 SN - JLA December\_2013: 706.64

#### 14.9 base\_nnu\_mnu\_CamSpecHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02235	$0.02216^{+0.00082}_{-0.00081}$ (+0.0 $\sigma$ )	$\beta_1^1$	-0.13	$-0.1^{+2.0}_{-1.9}$	$r_*$	143.7	$144.6^{+5.3}_{-5.4}$ (+0.1 $\sigma$ )
$\Omega_c h^2$	0.1206	$0.1200^{+0.0081}_{-0.0077}$ (-0.1 $\sigma$ )	$H_0$	69.0	$65.7^{+7.2}_{-8.8}$ (-0.0 $\sigma$ )	$100\theta_*$	1.04093	$1.0411^{+0.0014}_{-0.0014}$ (+0.2 $\sigma$ )
$100\theta_{\text{MC}}$	1.04084	$1.0408^{+0.0012}_{-0.0012}$ (+0.1 $\sigma$ )	$\Omega_\Lambda$	0.700	$0.661^{+0.078}_{-0.10}$ (+0.0 $\sigma$ )	$z_{\text{drag}}$	1060.01	$1059.5^{+2.6}_{-2.6}$ (-0.0 $\sigma$ )
$\tau$	0.0817	$0.083^{+0.043}_{-0.040}$ (+0.1 $\sigma$ )	$\Omega_m$	0.300	$0.339^{+0.10}_{-0.078}$ (-0.0 $\sigma$ )	$r_{\text{drag}}$	146.4	$147.3^{+5.6}_{-5.7}$ (+0.1 $\sigma$ )
$\Sigma m_\nu$ [eV]	0.002	< 0.734 (-0.0 $\sigma$ )	$\Omega_m h^2$	0.1430	$0.145^{+0.010}_{-0.0097}$ (-0.1 $\sigma$ )	$k_D$	0.14119	$0.1406^{+0.0041}_{-0.0039}$ (-0.1 $\sigma$ )
$N_{\text{eff}}$	3.17	$3.05^{+0.65}_{-0.63}$ (-0.1 $\sigma$ )	$\Omega_\nu h^2$	0.00002	< 0.00789 (-0.0 $\sigma$ )	$100\theta_D$	0.16119	$0.1610^{+0.0014}_{-0.0013}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.098	$3.097^{+0.094}_{-0.087}$ (-0.0 $\sigma$ )	$\Omega_m h^3$	0.0987	$0.095^{+0.014}_{-0.013}$ (-0.1 $\sigma$ )	$z_{\text{eq}}$	3362	$3396^{+160}_{-150}$ (-0.0 $\sigma$ )
$n_s$	0.9729	$0.966^{+0.033}_{-0.032}$ (+0.1 $\sigma$ )	$\sigma_8$	0.848	$0.795^{+0.092}_{-0.12}$ (-0.0 $\sigma$ )	$100\theta_{\text{eq}}$	0.8204	$0.814^{+0.030}_{-0.029}$ (+0.0 $\sigma$ )
$y_{\text{cal}}$	1.00056	$1.0003^{+0.0048}_{-0.0048}$ (-0.1 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4646	$0.460^{+0.028}_{-0.028}$ (-0.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07218	$0.0704^{+0.0037}_{-0.0045}$ (+0.0 $\sigma$ )
$A_{100}^{\text{PS}}$	251.9	$247^{+40}_{-50}$ (-0.5 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.628	$0.605^{+0.047}_{-0.058}$ (-0.0 $\sigma$ )	$H(0.57)$	94.2	$92.1^{+5.8}_{-5.9}$ (-0.0 $\sigma$ )
$A_{143}^{\text{PS}}$	36.5	$40^{+20}_{-20}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	1.020	$0.981^{+0.075}_{-0.098}$ (-0.0 $\sigma$ )	$D_A(0.57)$	1365	$1417^{+140}_{-130}$ (+0.0 $\sigma$ )
$A_{217}^{\text{PS}}$	95.4	$98^{+30}_{-30}$ (+0.1 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.490	$2.49^{+0.10}_{-0.096}$ (-0.1 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6732	$0.682^{+0.024}_{-0.019}$ (-0.0 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.7	$46^{+10}_{-10}$ (-2.7 $\sigma$ )	$z_{\text{re}}$	10.31	$10.4^{+3.7}_{-3.9}$ (+0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4887	$0.470^{+0.039}_{-0.050}$ (-0.0 $\sigma$ )
$A_{143}^{\text{tSZ}}$	2.97	< 6.60 (-0.9 $\sigma$ )	$10^9 A_s$	2.216	$2.21^{+0.21}_{-0.20}$ (-0.0 $\sigma$ )	$\sigma_8(0.57)$	0.633	$0.588^{+0.081}_{-0.10}$ (-0.0 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.410	$0.52^{+0.23}_{-0.20}$	$10^9 A_s e^{-2\tau}$	1.8818	$1.875^{+0.042}_{-0.044}$ (-0.3 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.2479	$0.2462^{+0.0089}_{-0.0084}$ (-0.2 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1223.6	$1229^{+43}_{-43}$ (-0.3 $\sigma$ )	$f_{2000}^{143}$	29.9	$29^{+7}_{-7}$ (-0.4 $\sigma$ )
$A^{\text{kSZ}}$	5.5	—	$D_{220}$	5702	$5694^{+80}_{-79}$ (-0.5 $\sigma$ )	$f_{2000}^{217}$	107.14	$106.8^{+4.8}_{-4.8}$ (+0.1 $\sigma$ )
$A_{100}^{\text{dust}}$	0.984	$0.99^{+0.38}_{-0.38}$	$D_{810}$	2531.4	$2531^{+27}_{-27}$ (-0.3 $\sigma$ )	$f_{2000}^{143 \times 217}$	32.3	$32^{+5}_{-5}$ (-0.4 $\sigma$ )
$A_{143}^{\text{dust}}$	1.029	$1.03^{+0.36}_{-0.36}$	$D_{1420}$	813.5	$814^{+10}_{-10}$ (-0.0 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10495.5	$10497.4$ ( $\nu$ : 4.1) (-0.2 $\sigma$ )
$A_{217}^{\text{dust}}$	1.227	$1.21^{+0.23}_{-0.23}$	$n_{\text{s},0.002}$	0.9729	$0.966^{+0.033}_{-0.032}$ (+0.1 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	8044.8	$8061.4$ ( $\nu$ : 20.1)
$A_{143 \times 217}^{\text{dust}}$	0.970	$0.98^{+0.35}_{-0.35}$	$Y_{\text{P}}$	0.2466	$0.2449^{+0.0089}_{-0.0084}$ (-0.2 $\sigma$ )	$\chi_{\text{prior}}^2$	3.7	$8.4$ ( $\nu$ : 6.0) (+0.3 $\sigma$ )
$c_{100}$	0.99665	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	Age/Gyr	13.65	$13.91^{+0.82}_{-0.74}$ (+0.0 $\sigma$ )	$\chi_{\text{CMB}}^2$	18540.3	$18558.8$ ( $\nu$ : 19.3) (+1220.8 $\sigma$ )
$c_{217}$	0.99752	$0.9973^{+0.0035}_{-0.0035}$ (+0.9 $\sigma$ )	$z_*$	1090.10	$1090.2^{+1.2}_{-1.1}$ (-0.1 $\sigma$ )			

Best-fit  $\chi^2_{\text{eff}} = 18544.05$ ;  $\Delta\chi^2_{\text{eff}} = 7282.54$ ;  $\bar{\chi}^2_{\text{eff}} = 18567.15$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 7282.73$ ;  $R - 1 = 0.00815$

$\chi^2_{\text{eff}}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.52 ( $\Delta$  -0.77) CamSpec like\_v9.10CMH\_unified: 8044.80

## 14.10 base\_nnu\_mnu\_CamSpecHM\_TT\_lowTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00052}_{-0.00049} \quad (-0.0\sigma)$	$\Omega_\Lambda$	$0.691^{+0.018}_{-0.018} \quad (-0.0\sigma)$	$k_D$	$0.1411^{+0.0036}_{-0.0034} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1202^{+0.0081}_{-0.0075} \quad (-0.1\sigma)$	$\Omega_m$	$0.309^{+0.018}_{-0.018} \quad (+0.0\sigma)$	$100\theta_D$	$0.1612^{+0.0012}_{-0.0011} \quad (-0.1\sigma)$
$100\theta_{MC}$	$1.0409^{+0.0011}_{-0.0011} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1437^{+0.0090}_{-0.0082} \quad (-0.1\sigma)$	$z_{eq}$	$3359^{+79}_{-84} \quad (+0.0\sigma)$
$\tau$	$0.085^{+0.039}_{-0.037} \quad (+0.0\sigma)$	$\Omega_\nu h^2$	$< 0.00284 \quad (+0.0\sigma)$	$100\theta_{eq}$	$0.821^{+0.016}_{-0.015} \quad (-0.0\sigma)$
$\Sigma m_\nu$ [eV]	$< 0.264 \quad (+0.0\sigma)$	$\Omega_m h^3$	$0.0980^{+0.010}_{-0.0097} \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.07171^{+0.00096}_{-0.00094} \quad (-0.0\sigma)$
$N_{eff}$	$3.16^{+0.52}_{-0.50} \quad (-0.1\sigma)$	$\sigma_8$	$0.828^{+0.043}_{-0.046} \quad (-0.1\sigma)$	$H(0.57)$	$93.7^{+3.4}_{-3.2} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.103^{+0.084}_{-0.080} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.023}_{-0.024} \quad (-0.1\sigma)$	$D_A(0.57)$	$1378^{+54}_{-54} \quad (+0.1\sigma)$
$n_s$	$0.974^{+0.021}_{-0.019} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.617^{+0.030}_{-0.032} \quad (-0.1\sigma)$	$F_{AP}(0.57)$	$0.6755^{+0.0045}_{-0.0045} \quad (+0.0\sigma)$
$y_{cal}$	$1.0003^{+0.0046}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.002^{+0.044}_{-0.051} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.481^{+0.023}_{-0.023} \quad (-0.1\sigma)$
$A_{100}^{PS}$	$247^{+40}_{-50} \quad (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.478^{+0.087}_{-0.086} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.617^{+0.034}_{-0.035} \quad (-0.1\sigma)$
$A_{143}^{PS}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$z_{re}$	$10.6^{+3.3}_{-3.5} \quad (+0.0\sigma)$	$Y_P^{BBN}$	$0.2477^{+0.0069}_{-0.0064} \quad (-0.2\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s$	$2.23^{+0.19}_{-0.17} \quad (-0.1\sigma)$	$f_{2000}^{143}$	$29^{+7}_{-7} \quad (-0.4\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.041}_{-0.041} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$106.7^{+4.7}_{-4.5} \quad (+0.1\sigma)$
$A_{143}^{tSZ}$	$< 6.59 \quad (-0.9\sigma)$	$D_{40}$	$1222^{+32}_{-33} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-5} \quad (-0.4\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.20}$	$D_{220}$	$5697^{+80}_{-79} \quad (-0.5\sigma)$	$\chi_{lowTEB}^2$	$10496.4 \quad (\nu: 3.2) \quad (-0.2\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{810}$	$2531^{+27}_{-27} \quad (-0.3\sigma)$	$\chi_{CamSpec}^2$	$8060.7 \quad (\nu: 19.7)$
$A^{kSZ}$	—	$D_{1420}$	$814^{+10}_{-10} \quad (-0.0\sigma)$	$\chi_{6DF}^2$	$0.070 \quad (\nu: 0.0) \quad (+0.0\sigma)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$n_{s,0.002}$	$0.974^{+0.021}_{-0.019} \quad (+0.1\sigma)$	$\chi_{MGS}^2$	$1.42 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$A_{143}^{dust}$	$1.03^{+0.35}_{-0.36}$	$Y_P$	$0.2464^{+0.0069}_{-0.0064} \quad (-0.2\sigma)$	$\chi_{DR11CMass}^2$	$3.01 \quad (\nu: 0.4) \quad (-0.0\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$Age/Gyr$	$13.71^{+0.46}_{-0.47} \quad (+0.1\sigma)$	$\chi_{DR11LOWZ}^2$	$0.73 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.34}_{-0.35}$	$z_*$	$1090.05^{+0.98}_{-0.93} \quad (-0.1\sigma)$	$\chi_{prior}^2$	$8.3 \quad (\nu: 5.8) \quad (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$r_*$	$143.9^{+4.6}_{-4.7} \quad (+0.1\sigma)$	$\chi_{CMB}^2$	$18557.2 \quad (\nu: 17.9) \quad (+1273.6\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$100\theta_*$	$1.0410^{+0.0014}_{-0.0014} \quad (+0.2\sigma)$	$\chi_{BAO}^2$	$5.2 \quad (\nu: 0.8) \quad (-0.0\sigma)$
$\beta_1^1$	$0.0^{+1.9}_{-1.9}$	$z_{drag}$	$1060.0^{+1.9}_{-1.8} \quad (-0.1\sigma)$		
$H_0$	$68.2^{+3.1}_{-2.9} \quad (-0.1\sigma)$	$r_{drag}$	$146.6^{+4.7}_{-4.8} \quad (+0.1\sigma)$		

$$\bar{\chi}_{eff}^2 = 18570.77; \Delta\bar{\chi}_{eff}^2 = 7282.61; R - 1 = 0.01085$$

### 14.11 base\_nnu\_mnu\_CamSpecHM\_TT\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02241^{+0.00062}_{-0.00059} \quad (+0.0\sigma)$	$\beta_1^1$	$0.0^{+2.0}_{-1.9}$	$r_*$	$143.2^{+4.5}_{-4.5} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1212^{+0.0078}_{-0.0074} \quad (-0.1\sigma)$	$H_0$	$68.5^{+4.7}_{-4.7} \quad (+0.0\sigma)$	$100\theta_*$	$1.0409^{+0.0013}_{-0.0013} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.0407^{+0.0011}_{-0.0011} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.690^{+0.041}_{-0.045} \quad (+0.0\sigma)$	$z_{\text{drag}}$	$1060.3^{+2.0}_{-2.0} \quad (-0.0\sigma)$
$\tau$	$0.088^{+0.042}_{-0.040} \quad (+0.1\sigma)$	$\Omega_m$	$0.310^{+0.045}_{-0.041} \quad (-0.0\sigma)$	$r_{\text{drag}}$	$145.8^{+4.7}_{-4.7} \quad (+0.1\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.368 \quad (-0.0\sigma)$	$\Omega_m h^2$	$0.1450^{+0.0090}_{-0.0081} \quad (-0.1\sigma)$	$k_D$	$0.1416^{+0.0035}_{-0.0034} \quad (-0.1\sigma)$
$N_{\text{eff}}$	$3.23^{+0.54}_{-0.50} \quad (-0.1\sigma)$	$\Omega_\nu h^2$	$< 0.00396 \quad (-0.0\sigma)$	$100\theta_D$	$0.1613^{+0.0012}_{-0.0012} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.112^{+0.087}_{-0.084} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.0994^{+0.011}_{-0.0098} \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3349^{+120}_{-110} \quad (-0.0\sigma)$
$n_s$	$0.977^{+0.024}_{-0.024} \quad (+0.1\sigma)$	$\sigma_8$	$0.827^{+0.059}_{-0.064} \quad (+0.0\sigma)$	$100\theta_{\text{eq}}$	$0.823^{+0.023}_{-0.023} \quad (+0.0\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0047}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.026}_{-0.026} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0717^{+0.0021}_{-0.0024} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$249^{+40}_{-50} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.617^{+0.034}_{-0.037} \quad (-0.0\sigma)$	$H(0.57)$	$94.1^{+4.0}_{-3.9} \quad (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.999^{+0.054}_{-0.059} \quad (-0.0\sigma)$	$D_A(0.57)$	$1371^{+78}_{-72} \quad (+0.0\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.476^{+0.091}_{-0.091} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.675^{+0.011}_{-0.010} \quad (-0.0\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.6\sigma)$	$z_{\text{re}}$	$10.8^{+3.5}_{-3.7} \quad (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.481^{+0.027}_{-0.028} \quad (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.51 \quad (-0.9\sigma)$	$10^9 A_s$	$2.25^{+0.20}_{-0.18} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.616^{+0.050}_{-0.055} \quad (+0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.22}_{-0.20}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.039}_{-0.040} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.2487^{+0.0070}_{-0.0069} \quad (-0.2\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1219^{+37}_{-35} \quad (-0.4\sigma)$	$f_{2000}^{143}$	$30^{+7}_{-7} \quad (-0.4\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5698^{+81}_{-80} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$107.1^{+4.7}_{-4.6} \quad (+0.1\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{810}$	$2532^{+27}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$33^{+5}_{-5} \quad (-0.4\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.35}$	$D_{1420}$	$814^{+10}_{-10} \quad (-0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.5 \quad (\nu: 3.5) \quad (-0.1\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.23}$	$n_{\text{s}, 0.002}$	$0.977^{+0.024}_{-0.024} \quad (+0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.5 \quad (\nu: 20.3)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.34}_{-0.35}$	$Y_{\text{P}}$	$0.2474^{+0.0070}_{-0.0069} \quad (-0.2\sigma)$	$\chi_{\text{H070p6}}^2$	$0.9 \quad (\nu: 0.7) \quad (+0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$\text{Age/Gyr}$	$13.65^{+0.53}_{-0.52} \quad (+0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.3 \quad (\nu: 5.8) \quad (+0.2\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$z_*$	$1090.1^{+1.0}_{-1.0} \quad (-0.2\sigma)$	$\chi_{\text{CMB}}^2$	$18557.9 \quad (\nu: 18.4) \quad (+1239.0\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 18567.15; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.62; R - 1 = 0.01176$$

## 14.12 base\_nnu\_mnu\_CamSpecHM\_TT\_lowTEB\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02241^{+0.00050}_{-0.00046} \quad (-0.0\sigma)$	$\Omega_\Lambda$	$0.693^{+0.016}_{-0.017} \quad (-0.0\sigma)$	$k_D$	$0.1415^{+0.0034}_{-0.0033} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1212^{+0.0078}_{-0.0073} \quad (-0.1\sigma)$	$\Omega_m$	$0.307^{+0.017}_{-0.016} \quad (+0.0\sigma)$	$100\theta_D$	$0.1613^{+0.0012}_{-0.0011} \quad (-0.1\sigma)$
$100\theta_{MC}$	$1.0408^{+0.0011}_{-0.0011} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1447^{+0.0086}_{-0.0079} \quad (-0.1\sigma)$	$z_{eq}$	$3350^{+76}_{-79} \quad (-0.0\sigma)$
$\tau$	$0.087^{+0.039}_{-0.037} \quad (+0.1\sigma)$	$\Omega_\nu h^2$	$< 0.00287 \quad (+0.0\sigma)$	$100\theta_{eq}$	$0.823^{+0.015}_{-0.015} \quad (+0.0\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.267 \quad (+0.0\sigma)$	$\Omega_m h^3$	$0.0994^{+0.0094}_{-0.0087} \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.07184^{+0.00091}_{-0.00088} \quad (+0.0\sigma)$
$N_{eff}$	$3.23^{+0.49}_{-0.45} \quad (-0.1\sigma)$	$\sigma_8$	$0.832^{+0.042}_{-0.046} \quad (-0.0\sigma)$	$H(0.57)$	$94.2^{+3.1}_{-3.0} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.109^{+0.084}_{-0.079} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.022}_{-0.024} \quad (-0.0\sigma)$	$D_A(0.57)$	$1368^{+49}_{-48} \quad (+0.1\sigma)$
$n_s$	$0.977^{+0.019}_{-0.018} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.619^{+0.029}_{-0.032} \quad (-0.0\sigma)$	$F_{AP}(0.57)$	$0.6748^{+0.0042}_{-0.0041} \quad (+0.0\sigma)$
$y_{cal}$	$1.0003^{+0.0046}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.003^{+0.047}_{-0.051} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.483^{+0.022}_{-0.023} \quad (-0.0\sigma)$
$A_{100}^{PS}$	$248^{+40}_{-50} \quad (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.476^{+0.086}_{-0.087} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.620^{+0.032}_{-0.035} \quad (-0.0\sigma)$
$A_{143}^{PS}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$z_{re}$	$10.7^{+3.3}_{-3.5} \quad (+0.0\sigma)$	$Y_P^{BBN}$	$0.2487^{+0.0064}_{-0.0062} \quad (-0.2\sigma)$
$A_{217}^{PS}$	$97^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s$	$2.24^{+0.20}_{-0.17} \quad (-0.0\sigma)$	$f_{2000}^{143}$	$30^{+6}_{-7} \quad (-0.4\sigma)$
$A_{217}^{CIB}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.039}_{-0.041} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$107.0^{+4.7}_{-4.5} \quad (+0.1\sigma)$
$A_{143}^{tSZ}$	$< 6.56 \quad (-0.9\sigma)$	$D_{40}$	$1219^{+30}_{-31} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-5} \quad (-0.3\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.22}_{-0.20}$	$D_{220}$	$5698^{+80}_{-79} \quad (-0.6\sigma)$	$\chi_{lowTEB}^2$	$10496.3 \quad (\nu: 3.2) \quad (-0.2\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{810}$	$2532^{+27}_{-27} \quad (-0.3\sigma)$	$\chi_{CamSpec}^2$	$8061.0 \quad (\nu: 19.9)$
$A^{kSZ}$	—	$D_{1420}$	$814^{+10}_{-10} \quad (-0.1\sigma)$	$\chi_{H070p6}^2$	$0.50 \quad (\nu: 0.1) \quad (+0.1\sigma)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$n_{s,0.002}$	$0.977^{+0.019}_{-0.018} \quad (+0.1\sigma)$	$\chi_{JLA}^2$	$706.68 \quad (\nu: 0.0) \quad (+0.0\sigma)$
$A_{143}^{dust}$	$1.03^{+0.35}_{-0.35}$	$Y_P$	$0.2473^{+0.0063}_{-0.0061} \quad (-0.2\sigma)$	$\chi_{6DF}^2$	$0.050 \quad (\nu: 0.0) \quad (+0.0\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$\text{Age/Gyr}$	$13.64^{+0.43}_{-0.42} \quad (+0.1\sigma)$	$\chi_{MGS}^2$	$1.60 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.34}_{-0.34}$	$z_*$	$1090.12^{+0.95}_{-0.92} \quad (-0.1\sigma)$	$\chi_{DR11CMass}^2$	$2.93 \quad (\nu: 0.3) \quad (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$r_*$	$143.3^{+4.3}_{-4.3} \quad (+0.1\sigma)$	$\chi_{DR11LOWZ}^2$	$0.55 \quad (\nu: 0.1) \quad (-0.0\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$100\theta_*$	$1.0409^{+0.0013}_{-0.0013} \quad (+0.1\sigma)$	$\chi_{prior}^2$	$8.3 \quad (\nu: 5.7) \quad (+0.3\sigma)$
$\beta_1^1$	$0.0^{+1.9}_{-1.9}$	$z_{drag}$	$1060.2^{+1.8}_{-1.7} \quad (-0.1\sigma)$	$\chi_{CMB}^2$	$18557.3 \quad (\nu: 17.9) \quad (+1261.9\sigma)$
$H_0$	$68.7^{+2.8}_{-2.7} \quad (-0.1\sigma)$	$r_{drag}$	$145.9^{+4.5}_{-4.5} \quad (+0.1\sigma)$	$\chi_{BAO}^2$	$5.1 \quad (\nu: 0.6) \quad (-0.0\sigma)$

$$\bar{\chi}_{eff}^2 = 19277.89; \Delta\bar{\chi}_{eff}^2 = 7282.61; R - 1 = 0.01208$$

### 14.13 base\_nnu\_mnu\_CamSpecHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022192	$0.02214^{+0.00048}_{-0.00048}$ $(-0.0\sigma)$	$\mathcal{C}_{EE}$	0.9985	$0.9986^{+0.0094}_{-0.0094}$	$r_*$	146.76	$146.8^{+4.0}_{-3.9}$ $(+0.8\sigma)$
$\Omega_c h^2$	0.1161	$0.1163^{+0.0061}_{-0.0062}$ $(-0.9\sigma)$	$\beta_1^1$	-0.03	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	1.04155	$1.0415^{+0.0012}_{-0.0011}$ $(+0.8\sigma)$
$100\theta_{MC}$	1.04122	$1.04111^{+0.00094}_{-0.00090}$ $(+0.7\sigma)$	$H_0$	66.58	$64.9^{+4.6}_{-5.0}$ $(-0.4\sigma)$	$z_{drag}$	1059.06	$1059.0^{+1.7}_{-1.6}$ $(-0.4\sigma)$
$\tau$	0.0712	$0.077^{+0.035}_{-0.035}$ $(-0.2\sigma)$	$\Omega_\Lambda$	0.688	$0.665^{+0.046}_{-0.058}$ $(-0.1\sigma)$	$r_{drag}$	149.51	$149.5^{+4.1}_{-4.0}$ $(+0.8\sigma)$
$\Sigma m_\nu$ [eV]	0.002	$< 0.518$ $(+0.1\sigma)$	$\Omega_m$	0.312	$0.335^{+0.058}_{-0.046}$ $(+0.1\sigma)$	$k_D$	0.13909	$0.1391^{+0.0029}_{-0.0029}$ $(-0.7\sigma)$
$N_{eff}$	2.822	$2.82^{+0.42}_{-0.40}$ $(-0.8\sigma)$	$\Omega_m h^2$	0.1383	$0.1403^{+0.0077}_{-0.0077}$ $(-0.7\sigma)$	$100\theta_D$	0.16030	$0.16031^{+0.00093}_{-0.00092}$ $(-1.1\sigma)$
$\ln(10^{10} A_s)$	3.065	$3.076^{+0.075}_{-0.074}$ $(-0.5\sigma)$	$\Omega_\nu h^2$	0.00002	$< 0.00557$ $(+0.1\sigma)$	$z_{eq}$	3406	$3411^{+83}_{-82}$ $(+0.1\sigma)$
$n_s$	0.9595	$0.958^{+0.019}_{-0.019}$ $(-0.3\sigma)$	$\Omega_m h^3$	0.0921	$0.0911^{+0.0085}_{-0.0080}$ $(-0.7\sigma)$	$100\theta_{eq}$	0.8121	$0.811^{+0.016}_{-0.016}$ $(-0.1\sigma)$
$y_{cal}$	1.00041	$1.0003^{+0.0050}_{-0.0049}$ $(-0.0\sigma)$	$\sigma_8$	0.826	$0.791^{+0.067}_{-0.083}$ $(-0.4\sigma)$	$r_{drag}/D_V(0.57)$	0.07158	$0.0705^{+0.0022}_{-0.0027}$ $(-0.1\sigma)$
$A_{100}^{PS}$	236.9	$240^{+40}_{-40}$ $(-0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4613	$0.456^{+0.020}_{-0.022}$ $(-0.7\sigma)$	$H(0.57)$	91.67	$90.8^{+3.5}_{-3.6}$ $(-0.6\sigma)$
$A_{143}^{PS}$	33.0	$36^{+20}_{-20}$ $(-0.9\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.6172	$0.601^{+0.037}_{-0.042}$ $(-0.6\sigma)$	$D_A(0.57)$	1408	$1434^{+84}_{-78}$ $(+0.5\sigma)$
$A_{217}^{PS}$	100.3	$100^{+30}_{-30}$ $(+0.2\sigma)$	$\sigma_8/h^{0.5}$	1.012	$0.982^{+0.060}_{-0.072}$ $(-0.4\sigma)$	$F_{AP}(0.57)$	0.6761	$0.682^{+0.014}_{-0.011}$ $(+0.1\sigma)$
$A_{217}^{CIB}$	46.5	$44^{+10}_{-10}$ $(-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	2.492	$2.489^{+0.079}_{-0.080}$ $(-0.5\sigma)$	$f\sigma_8(0.57)$	0.4792	$0.467^{+0.030}_{-0.035}$ $(-0.6\sigma)$
$A_{143}^{tSZ}$	4.99	$< 6.98$ $(-0.9\sigma)$	$z_{re}$	9.25	$9.8^{+3.3}_{-3.4}$ $(-0.3\sigma)$	$\sigma_8(0.57)$	0.614	$0.584^{+0.057}_{-0.070}$ $(-0.4\sigma)$
$r_{143 \times 217}^{PS}$	0.466	$0.52^{+0.24}_{-0.22}$	$10^9 A_s$	2.144	$2.17^{+0.17}_{-0.16}$ $(-0.5\sigma)$	$Y_P^{BBN}$	0.2432	$0.2431^{+0.0059}_{-0.0058}$ $(-0.9\sigma)$
$\xi^{tSZ \times CIB}$	0.01	—	$10^9 A_s e^{-2\tau}$	1.8595	$1.858^{+0.037}_{-0.038}$ $(-1.1\sigma)$	$f_{2000}^{143}$	26.7	$27^{+6}_{-6}$ $(-0.8\sigma)$
$A^{kSZ}$	1.9	—	$D_{40}$	1237.7	$1239^{+31}_{-31}$ $(-0.4\sigma)$	$f_{2000}^{217}$	104.74	$105.1^{+4.2}_{-4.2}$ $(-0.3\sigma)$
$A_{100}^{dust}$	0.982	$0.98^{+0.38}_{-0.39}$	$D_{220}$	5712	$5711^{+74}_{-74}$ $(-0.5\sigma)$	$f_{2000}^{143 \times 217}$	29.77	$30^{+5}_{-5}$ $(-0.9\sigma)$
$A_{143}^{dust}$	1.021	$1.02^{+0.36}_{-0.35}$	$D_{810}$	2528.4	$2528^{+27}_{-27}$ $(-0.5\sigma)$	$\chi_{lowTEB}^2$	10496.63	$10497.8$ $(\nu: 2.8)$ $(-0.3\sigma)$
$A_{217}^{dust}$	1.209	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	816.4	$816.3^{+9.7}_{-9.4}$ $(+0.2\sigma)$	$\chi_{CamSpec}^2$	12934.0	$12952.0$ $(\nu: 20.3)$
$A_{143 \times 217}^{dust}$	0.975	$0.98^{+0.35}_{-0.36}$	$n_{s,0.002}$	0.9595	$0.958^{+0.019}_{-0.019}$ $(-0.3\sigma)$	$\chi_{prior}^2$	3.2	$9.1$ $(\nu: 6.5)$ $(-1.8\sigma)$
$c_{100}$	0.99680	$0.9968^{+0.0019}_{-0.0019}$ $(-1.8\sigma)$	$Y_P$	0.2419	$0.2418^{+0.0058}_{-0.0058}$ $(-0.9\sigma)$	$\chi_{CMB}^2$	23430.6	$23449.8$ $(\nu: 20.0)$ $(+1481.3\sigma)$
$c_{217}$	0.99678	$0.9969^{+0.0035}_{-0.0034}$ $(+0.6\sigma)$	Age/Gyr	13.999	$14.10^{+0.51}_{-0.48}$ $(+0.7\sigma)$			
$c_{TE}$	1.0032	$1.0038^{+0.0091}_{-0.0090}$	$z_*$	1089.55	$1089.66^{+0.80}_{-0.78}$ $(-1.1\sigma)$			

Best-fit  $\chi_{eff}^2 = 23433.82$ ;  $\Delta\chi_{eff}^2 = 10499.13$ ;  $\bar{\chi}_{eff}^2 = 23458.90$ ;  $\Delta\bar{\chi}_{eff}^2 = 10489.27$ ;  $R - 1 = 0.00976$   
 $\chi_{eff}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.63 ( $\Delta$  -0.71) CamSpec like\_v9.10CMH\_unified: 12934.00



### 14.14 base\_nnu\_mnu\_CamSpecHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02228^{+0.00038}_{-0.00038} \quad (-0.0\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$z_{\text{drag}}$	$1059.3^{+1.4}_{-1.5} \quad (-0.5\sigma)$
$\Omega_c h^2$	$0.1164^{+0.0060}_{-0.0063} \quad (-0.9\sigma)$	$H_0$	$66.8^{+2.5}_{-2.4} \quad (-0.6\sigma)$	$r_{\text{drag}}$	$149.0^{+4.1}_{-3.7} \quad (+0.8\sigma)$
$100\theta_{\text{MC}}$	$1.04116^{+0.00094}_{-0.00088} \quad (+0.7\sigma)$	$\Omega_\Lambda$	$0.687^{+0.016}_{-0.016} \quad (-0.1\sigma)$	$k_{\text{D}}$	$0.1395^{+0.0027}_{-0.0029} \quad (-0.8\sigma)$
$\tau$	$0.078^{+0.035}_{-0.035} \quad (-0.3\sigma)$	$\Omega_{\text{m}}$	$0.313^{+0.016}_{-0.016} \quad (+0.1\sigma)$	$100\theta_{\text{D}}$	$0.16043^{+0.00090}_{-0.00089} \quad (-1.1\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.180 \quad (+0.1\sigma)$	$\Omega_{\text{m}} h^2$	$0.1394^{+0.0065}_{-0.0069} \quad (-0.9\sigma)$	$z_{\text{eq}}$	$3384^{+57}_{-58} \quad (+0.1\sigma)$
$N_{\text{eff}}$	$2.89^{+0.37}_{-0.39} \quad (-0.8\sigma)$	$\Omega_\nu h^2$	$< 0.00194 \quad (+0.1\sigma)$	$100\theta_{\text{eq}}$	$0.816^{+0.011}_{-0.011} \quad (-0.0\sigma)$
$\ln(10^{10} A_{\text{s}})$	$3.080^{+0.071}_{-0.073} \quad (-0.6\sigma)$	$\Omega_{\text{m}} h^3$	$0.0932^{+0.0072}_{-0.0073} \quad (-0.8\sigma)$	$r_{\text{drag}}/D_{\text{V}}(0.57)$	$0.07155^{+0.00084}_{-0.00083} \quad (+0.0\sigma)$
$n_{\text{s}}$	$0.964^{+0.016}_{-0.016} \quad (-0.3\sigma)$	$\sigma_8$	$0.817^{+0.037}_{-0.037} \quad (-0.8\sigma)$	$H(0.57)$	$92.0^{+2.6}_{-2.6} \quad (-0.8\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0048} \quad (-0.0\sigma)$	$\sigma_8 \Omega_{\text{m}}^{0.5}$	$0.457^{+0.019}_{-0.019} \quad (-0.8\sigma)$	$D_{\text{A}}(0.57)$	$1404^{+46}_{-45} \quad (+0.7\sigma)$
$A_{100}^{\text{PS}}$	$240^{+40}_{-50} \quad (-0.7\sigma)$	$\sigma_8 \Omega_{\text{m}}^{0.25}$	$0.611^{+0.025}_{-0.026} \quad (-0.8\sigma)$	$F_{\text{AP}}(0.57)$	$0.6763^{+0.0041}_{-0.0040} \quad (+0.1\sigma)$
$A_{143}^{\text{PS}}$	$36^{+20}_{-20} \quad (-0.8\sigma)$	$\sigma_8/h^{0.5}$	$0.9998^{+0.039}_{-0.040} \quad (-0.7\sigma)$	$f\sigma_8(0.57)$	$0.476^{+0.019}_{-0.020} \quad (-0.8\sigma)$
$A_{217}^{\text{PS}}$	$100^{+30}_{-20} \quad (+0.2\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.481^{+0.077}_{-0.079} \quad (-0.6\sigma)$	$\sigma_8(0.57)$	$0.608^{+0.029}_{-0.029} \quad (-0.7\sigma)$
$A_{217}^{\text{CIB}}$	$44^{+10}_{-10} \quad (-2.9\sigma)$	$z_{\text{re}}$	$9.8^{+3.1}_{-3.2} \quad (-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.2442^{+0.0051}_{-0.0055} \quad (-1.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.94 \quad (-1.0\sigma)$	$10^9 A_{\text{s}}$	$2.18^{+0.16}_{-0.15} \quad (-0.6\sigma)$	$f_{2000}^{143}$	$27^{+6}_{-6} \quad (-0.7\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.24}_{-0.22}$	$10^9 A_{\text{s}} e^{-2\tau}$	$1.860^{+0.036}_{-0.038} \quad (-1.1\sigma)$	$f_{2000}^{217}$	$105.0^{+4.2}_{-4.2} \quad (-0.3\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1234^{+28}_{-28} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+5}_{-5} \quad (-0.8\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5713^{+73}_{-73} \quad (-0.4\sigma)$	$\chi_{\text{lowTEB}}^2$	$10497.1 \quad (\nu: 2.4) \quad (-0.3\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{810}$	$2528^{+28}_{-26} \quad (-0.5\sigma)$	$\chi_{\text{CamSpec}}^2$	$12951.6 \quad (\nu: 19.7)$
$A_{143}^{\text{dust}}$	$1.02^{+0.37}_{-0.35}$	$D_{1420}$	$816.0^{+9.8}_{-9.2} \quad (+0.2\sigma)$	$\chi_{6\text{DF}}^2$	$0.08 \quad (\nu: 0.0) \quad (+0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.23^{+0.23}_{-0.23}$	$n_{\text{s},0.002}$	$0.964^{+0.016}_{-0.016} \quad (-0.3\sigma)$	$\chi_{\text{MGS}}^2$	$1.20 \quad (\nu: 0.1) \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.36}_{-0.36}$	$Y_{\text{P}}$	$0.2428^{+0.0051}_{-0.0055} \quad (-1.0\sigma)$	$\chi_{\text{DR11CMass}}^2$	$3.00 \quad (\nu: 0.4) \quad (+0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$\text{Age}/\text{Gyr}$	$13.95^{+0.39}_{-0.37} \quad (+0.8\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.92 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$c_{217}$	$0.9969^{+0.0035}_{-0.0035} \quad (+0.7\sigma)$	$z_*$	$1089.54^{+0.73}_{-0.76} \quad (-1.2\sigma)$	$\chi_{\text{prior}}^2$	$9.1 \quad (\nu: 6.5) \quad (-1.8\sigma)$
$c_{\text{TE}}$	$1.0037^{+0.0091}_{-0.0089}$	$r_*$	$146.3^{+3.9}_{-3.6} \quad (+0.9\sigma)$	$\chi_{\text{CMB}}^2$	$23448.7 \quad (\nu: 18.8) \quad (+1398.6\sigma)$
$c_{\text{EE}}$	$0.9996^{+0.0094}_{-0.0089}$	$100\theta_*$	$1.0415^{+0.0012}_{-0.0011} \quad (+0.8\sigma)$	$\chi_{\text{BAO}}^2$	$5.2 \quad (\nu: 0.8) \quad (+0.0\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 23462.99; \Delta\chi_{\text{eff}}^2 = 10489.46; R - 1 = 0.01437$$

### 14.15 base\_nnu\_mnu\_CamSpecHM\_TTTEE\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02229^{+0.00042}_{-0.00042}$ (+0.0 $\sigma$ )	$c_{EE}$	$0.99996^{+0.0094}_{-0.0091}$	$r_*$	$145.7^{+3.8}_{-3.7}$ (+0.8 $\sigma$ )
$\Omega_c h^2$	$0.1174^{+0.0060}_{-0.0061}$ (−0.9 $\sigma$ )	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.0413^{+0.0011}_{-0.0010}$ (+0.7 $\sigma$ )
$100\theta_{MC}$	$1.04102^{+0.00088}_{-0.00086}$ (+0.6 $\sigma$ )	$H_0$	$66.6^{+3.3}_{-3.5}$ (−0.3 $\sigma$ )	$z_{drag}$	$1059.5^{+1.5}_{-1.6}$ (−0.4 $\sigma$ )
$\tau$	$0.079^{+0.035}_{-0.035}$ (−0.2 $\sigma$ )	$\Omega_\Lambda$	$0.682^{+0.030}_{-0.033}$ (+0.0 $\sigma$ )	$r_{drag}$	$148.4^{+3.9}_{-3.8}$ (+0.7 $\sigma$ )
$\Sigma m_\nu$ [eV]	< 0.294 (+0.0 $\sigma$ )	$\Omega_m$	$0.318^{+0.033}_{-0.030}$ (−0.0 $\sigma$ )	$k_D$	$0.1398^{+0.0026}_{-0.0028}$ (−0.7 $\sigma$ )
$N_{eff}$	$2.94^{+0.38}_{-0.38}$ (−0.7 $\sigma$ )	$\Omega_m h^2$	$0.1408^{+0.0067}_{-0.0067}$ (−0.8 $\sigma$ )	$100\theta_D$	$0.16054^{+0.00087}_{-0.00091}$ (−1.0 $\sigma$ )
$\ln(10^{10} A_s)$	$3.084^{+0.072}_{-0.075}$ (−0.5 $\sigma$ )	$\Omega_\nu h^2$	< 0.00316 (+0.0 $\sigma$ )	$z_{eq}$	$3386^{+75}_{-73}$ (−0.0 $\sigma$ )
$n_s$	$0.965^{+0.018}_{-0.017}$ (−0.2 $\sigma$ )	$\Omega_m h^3$	$0.0939^{+0.0075}_{-0.0074}$ (−0.7 $\sigma$ )	$100\theta_{eq}$	$0.816^{+0.014}_{-0.014}$ (+0.1 $\sigma$ )
$y_{cal}$	$1.0003^{+0.0050}_{-0.0049}$ (−0.0 $\sigma$ )	$\sigma_8$	$0.813^{+0.049}_{-0.051}$ (−0.5 $\sigma$ )	$r_{drag}/D_V(0.57)$	$0.0713^{+0.0016}_{-0.0017}$ (+0.1 $\sigma$ )
$A_{100}^{PS}$	$241^{+40}_{-40}$ (−0.7 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	$0.458^{+0.020}_{-0.020}$ (−0.8 $\sigma$ )	$H(0.57)$	$92.1^{+3.0}_{-2.9}$ (−0.6 $\sigma$ )
$A_{143}^{PS}$	$37^{+20}_{-20}$ (−0.8 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.029}_{-0.029}$ (−0.7 $\sigma$ )	$D_A(0.57)$	$1405^{+60}_{-56}$ (+0.4 $\sigma$ )
$A_{217}^{PS}$	$100^{+30}_{-20}$ (+0.1 $\sigma$ )	$\sigma_8/h^{0.5}$	$0.996^{+0.045}_{-0.048}$ (−0.5 $\sigma$ )	$F_{AP}(0.57)$	$0.6775^{+0.0082}_{-0.0075}$ (−0.0 $\sigma$ )
$A_{217}^{CIB}$	$45^{+10}_{-10}$ (−2.9 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	$2.482^{+0.077}_{-0.079}$ (−0.6 $\sigma$ )	$f\sigma_8(0.57)$	$0.475^{+0.022}_{-0.023}$ (−0.7 $\sigma$ )
$A_{143}^{tSZ}$	< 6.90 (−1.0 $\sigma$ )	$z_{re}$	$9.9^{+3.2}_{-3.3}$ (−0.3 $\sigma$ )	$\sigma_8(0.57)$	$0.604^{+0.041}_{-0.043}$ (−0.5 $\sigma$ )
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.21}$	$10^9 A_s$	$2.19^{+0.16}_{-0.16}$ (−0.5 $\sigma$ )	$Y_P^{BBN}$	$0.2448^{+0.0051}_{-0.0055}$ (−0.8 $\sigma$ )
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.865^{+0.036}_{-0.036}$ (−1.0 $\sigma$ )	$f_{2000}^{143}$	$28^{+6}_{-6}$ (−0.7 $\sigma$ )
$A^{kSZ}$	—	$D_{40}$	$1233^{+30}_{-29}$ (−0.5 $\sigma$ )	$f_{2000}^{217}$	$105.4^{+4.2}_{-4.2}$ (−0.2 $\sigma$ )
$A_{100}^{dust}$	$0.99^{+0.39}_{-0.38}$	$D_{220}$	$5712^{+74}_{-73}$ (−0.4 $\sigma$ )	$f_{2000}^{143 \times 217}$	$31^{+5}_{-5}$ (−0.8 $\sigma$ )
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.35}$	$D_{810}$	$2529^{+27}_{-26}$ (−0.5 $\sigma$ )	$\chi_{lowTEB}^2$	10497.1 ( $\nu$ : 2.5) (−0.4 $\sigma$ )
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	$815.7^{+9.7}_{-9.3}$ (+0.2 $\sigma$ )	$\chi_{CamSpec}^2$	12952.2 ( $\nu$ : 20.7)
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.36}$	$n_{s,0.002}$	$0.965^{+0.018}_{-0.017}$ (−0.2 $\sigma$ )	$\chi_{H070p6}^2$	1.7 ( $\nu$ : 0.9) (+0.4 $\sigma$ )
$c_{100}$	$0.9968^{+0.0019}_{-0.0019}$ (−1.8 $\sigma$ )	$Y_P$	$0.2435^{+0.0051}_{-0.0055}$ (−0.8 $\sigma$ )	$\chi_{prior}^2$	9.1 ( $\nu$ : 6.5) (−1.7 $\sigma$ )
$c_{217}$	$0.9970^{+0.0035}_{-0.0035}$ (+0.7 $\sigma$ )	Age/Gyr	$13.93^{+0.42}_{-0.40}$ (+0.6 $\sigma$ )	$\chi_{CMB}^2$	23449.3 ( $\nu$ : 19.7) (+775.7 $\sigma$ )
$c_{TE}$	$1.0040^{+0.0091}_{-0.0090}$	$z_*$	$1089.67^{+0.73}_{-0.76}$ (−1.0 $\sigma$ )		

$$\bar{\chi}_{eff}^2 = 23460.05; \Delta\bar{\chi}_{eff}^2 = 10489.53; R - 1 = 0.01422$$

# 14.16 base\_nnu\_mnu\_CamSpecHM\_TTTEEE\_lowTEB\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00037}_{-0.00037} \quad (+0.0\sigma)$	$H_0$	$67.4^{+2.4}_{-2.3} \quad (-0.5\sigma)$	$k_D$	$0.1400^{+0.0025}_{-0.0027} \quad (-0.7\sigma)$
$\Omega_c h^2$	$0.1174^{+0.0060}_{-0.0060} \quad (-0.8\sigma)$	$\Omega_\Lambda$	$0.690^{+0.015}_{-0.015} \quad (+0.0\sigma)$	$100\theta_D$	$0.16058^{+0.00086}_{-0.00091} \quad (-1.0\sigma)$
$100\theta_{MC}$	$1.04105^{+0.00087}_{-0.00083} \quad (+0.6\sigma)$	$\Omega_m$	$0.310^{+0.015}_{-0.014} \quad (-0.0\sigma)$	$z_{eq}$	$3374^{+55}_{-56} \quad (-0.0\sigma)$
$\tau$	$0.080^{+0.033}_{-0.035} \quad (-0.3\sigma)$	$\Omega_m h^2$	$0.1404^{+0.0061}_{-0.0066} \quad (-0.8\sigma)$	$100\theta_{eq}$	$0.818^{+0.011}_{-0.010} \quad (+0.1\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.176 \quad (+0.1\sigma)$	$\Omega_\nu h^2$	$< 0.00189 \quad (+0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.07171^{+0.00080}_{-0.00079} \quad (+0.1\sigma)$
$N_{eff}$	$2.97^{+0.35}_{-0.37} \quad (-0.7\sigma)$	$\Omega_m h^3$	$0.0946^{+0.0068}_{-0.0071} \quad (-0.7\sigma)$	$H(0.57)$	$92.6^{+2.4}_{-2.6} \quad (-0.7\sigma)$
$\ln(10^{10} A_s)$	$3.086^{+0.070}_{-0.073} \quad (-0.6\sigma)$	$\sigma_8$	$0.822^{+0.036}_{-0.037} \quad (-0.8\sigma)$	$D_A(0.57)$	$1394^{+44}_{-42} \quad (+0.6\sigma)$
$n_s$	$0.967^{+0.015}_{-0.015} \quad (-0.2\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.018}_{-0.019} \quad (-0.8\sigma)$	$F_{AP}(0.57)$	$0.6755^{+0.0038}_{-0.0037} \quad (-0.0\sigma)$
$y_{cal}$	$1.0003^{+0.0050}_{-0.0047} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.613^{+0.025}_{-0.025} \quad (-0.8\sigma)$	$f\sigma_8(0.57)$	$0.478^{+0.019}_{-0.019} \quad (-0.8\sigma)$
$A_{100}^{PS}$	$241^{+50}_{-50} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.001^{+0.038}_{-0.039} \quad (-0.7\sigma)$	$\sigma_8(0.57)$	$0.612^{+0.029}_{-0.029} \quad (-0.7\sigma)$
$A_{143}^{PS}$	$37^{+20}_{-20} \quad (-0.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.479^{+0.076}_{-0.079} \quad (-0.7\sigma)$	$Y_P^{BBN}$	$0.2452^{+0.0048}_{-0.0053} \quad (-0.9\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-20} \quad (+0.1\sigma)$	$z_{re}$	$10.0^{+3.1}_{-3.2} \quad (-0.4\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-6} \quad (-0.6\sigma)$
$A_{217}^{CIB}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.19^{+0.16}_{-0.16} \quad (-0.6\sigma)$	$f_{2000}^{217}$	$105.4^{+4.2}_{-4.2} \quad (-0.2\sigma)$
$A_{143}^{tSZ}$	$< 6.90 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.865^{+0.036}_{-0.036} \quad (-1.0\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+5}_{-5} \quad (-0.7\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.22}$	$D_{40}$	$1230^{+28}_{-27} \quad (-0.5\sigma)$	$\chi_{lowTEB}^2$	$10496.8 \quad (\nu: 2.3) \quad (-0.4\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{220}$	$5713^{+75}_{-74} \quad (-0.4\sigma)$	$\chi_{CamSpec}^2$	$12952.1 \quad (\nu: 20.5)$
$A^{kSZ}$	—	$D_{810}$	$2529^{+28}_{-26} \quad (-0.5\sigma)$	$\chi_{H070p6}^2$	$1.07 \quad (\nu: 0.3) \quad (+0.6\sigma)$
$A_{100}^{dust}$	$0.99^{+0.39}_{-0.39}$	$D_{1420}$	$815.7^{+9.8}_{-9.0} \quad (+0.2\sigma)$	$\chi_{JLA}^2$	$706.74 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.35}$	$n_{s,0.002}$	$0.967^{+0.015}_{-0.015} \quad (-0.2\sigma)$	$\chi_{6DF}^2$	$0.054 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$Y_P$	$0.2439^{+0.0048}_{-0.0053} \quad (-0.9\sigma)$	$\chi_{MGS}^2$	$1.40 \quad (\nu: 0.1) \quad (+0.1\sigma)$
$A_{143 \times 217}^{dust}$	$0.99^{+0.36}_{-0.36}$	$Age/Gyr$	$13.87^{+0.37}_{-0.34} \quad (+0.7\sigma)$	$\chi_{DR11CMass}^2$	$2.83 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.62^{+0.71}_{-0.75} \quad (-1.1\sigma)$	$\chi_{DR11LOWZ}^2$	$0.68 \quad (\nu: 0.2) \quad (-0.1\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0036} \quad (+0.7\sigma)$	$r_*$	$145.6^{+3.7}_{-3.5} \quad (+0.8\sigma)$	$\chi_{prior}^2$	$9.1 \quad (\nu: 6.5) \quad (-1.9\sigma)$
$c_{TE}$	$1.0040^{+0.0092}_{-0.0089}$	$100\theta_*$	$1.0413^{+0.0011}_{-0.0010} \quad (+0.7\sigma)$	$\chi_{CMB}^2$	$23448.9 \quad (\nu: 19.4) \quad (+1533.3\sigma)$
$c_{EE}$	$1.0003^{+0.0093}_{-0.0090}$	$z_{drag}$	$1059.6^{+1.3}_{-1.4} \quad (-0.4\sigma)$	$\chi_{BAO}^2$	$4.96 \quad (\nu: 0.4) \quad (+0.0\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_{drag}$	$148.3^{+3.9}_{-3.4} \quad (+0.8\sigma)$		

$$\bar{\chi}_{eff}^2 = 24170.82; \Delta \bar{\chi}_{eff}^2 = 10489.87; R - 1 = 0.02239$$

### 14.17 base\_nnu\_mnu\_plikHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02233	$0.02212^{+0.00082}_{-0.00079}$	$\Omega_m$	0.298	$0.344^{+0.092}_{-0.078}$	$D_A/\text{Gpc}$	13.894	$13.88^{+0.48}_{-0.48}$
$\Omega_c h^2$	0.1186	$0.1201^{+0.0077}_{-0.0074}$	$\Omega_m h^2$	0.1409	$0.145^{+0.010}_{-0.0090}$	$z_{\text{drag}}$	1059.78	$1059.4^{+2.6}_{-2.5}$
$100\theta_{\text{MC}}$	1.04110	$1.0407^{+0.0012}_{-0.0012}$	$\Omega_\nu h^2$	0.00005	$< 0.00728$	$r_{\text{drag}}$	147.3	$147.2^{+5.4}_{-5.4}$
$\tau$	0.0652	$0.076^{+0.042}_{-0.038}$	$\Omega_m h^3$	0.0970	$0.095^{+0.013}_{-0.013}$	$k_D$	0.14043	$0.1406^{+0.0039}_{-0.0038}$
$\Sigma m_\nu [\text{eV}]$	0.005	$< 0.677$	$\sigma_8$	0.827	$0.777^{+0.078}_{-0.087}$	$100\theta_D$	0.16102	$0.1611^{+0.0013}_{-0.0013}$
$N_{\text{eff}}$	3.08	$3.07^{+0.62}_{-0.62}$	$\sigma_8 \Omega_m^{0.5}$	0.4512	$0.453^{+0.018}_{-0.018}$	$z_{\text{eq}}$	3351	$3391^{+160}_{-150}$
$\ln(10^{10} A_s)$	3.061	$3.085^{+0.089}_{-0.082}$	$\sigma_8 \Omega_m^{0.25}$	0.6108	$0.593^{+0.031}_{-0.035}$	$k_{\text{eq}}$	0.010251	$0.01036^{+0.00033}_{-0.00031}$
$n_s$	0.9707	$0.965^{+0.033}_{-0.031}$	$\sigma_8/h^{0.5}$	0.997	$0.961^{+0.052}_{-0.060}$	$100\theta_{\text{eq}}$	0.8225	$0.815^{+0.031}_{-0.029}$
$y_{\text{cal}}$	0.99996	$1.0003^{+0.0050}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.442	$2.472^{+0.086}_{-0.080}$	$100\theta_{s,\text{eq}}$	0.4542	$0.451^{+0.015}_{-0.014}$
$A_{217}^{\text{CIB}}$	67.5	$65^{+10}_{-10}$	$z_{\text{re}}$	8.74	$9.8^{+3.7}_{-3.8}$	$r_{\text{drag}}/D_V(0.57)$	0.07236	$0.0701^{+0.0035}_{-0.0040}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.135	$2.19^{+0.20}_{-0.19}$	$H(0.57)$	93.7	$91.9^{+5.7}_{-5.3}$
$A_{143}^{\text{tSZ}}$	7.18	$4.9^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8739	$1.879^{+0.041}_{-0.043}$	$D_A(0.57)$	1371	$1423^{+130}_{-120}$
$A_{100}^{\text{PS}}$	254	$263^{+60}_{-60}$	$D_{40}$	1220.1	$1231^{+41}_{-41}$	$F_{\text{AP}}(0.57)$	0.6725	$0.684^{+0.022}_{-0.019}$
$A_{143}^{\text{PS}}$	39.3	$46^{+20}_{-20}$	$D_{220}$	5716	$5714^{+82}_{-80}$	$f\sigma_8(0.57)$	0.4760	$0.461^{+0.028}_{-0.033}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{810}$	2531.9	$2534^{+28}_{-28}$	$\sigma_8(0.57)$	0.618	$0.573^{+0.072}_{-0.080}$
$A_{217}^{\text{PS}}$	97.0	$97^{+20}_{-20}$	$D_{1420}$	814.8	$814^{+10}_{-10}$	$f_{2000}^{143}$	30.0	$31^{+7}_{-7}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.16	$229.4^{+4.3}_{-4.3}$	$f_{2000}^{143 \times 217}$	32.56	$34^{+5}_{-5}$
$A_{100}^{\text{dustTT}}$	7.46	$7.5^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9707	$0.965^{+0.033}_{-0.031}$	$f_{2000}^{217}$	106.07	$107.0^{+4.7}_{-4.7}$
$A_{143}^{\text{dustTT}}$	9.10	$9.1^{+3.6}_{-3.6}$	$Y_P$	0.2458	$0.2455^{+0.0086}_{-0.0083}$	$\chi_{\text{lensing}}^2$	9.43	$9.6 (\nu: 1.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.3^{+8.2}_{-8.1}$	$Y_P^{\text{BBN}}$	0.2472	$0.2468^{+0.0086}_{-0.0084}$	$\chi_{\text{lowTEB}}^2$	10494.53	$10496.9 (\nu: 3.2)$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	2.610	$2.64^{+0.14}_{-0.13}$	$\chi_{\text{plik}}^2$	766.5	$780.5 (\nu: 16.9)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.73	$13.93^{+0.75}_{-0.72}$	$\chi_{\text{prior}}^2$	2.1	$7.5 (\nu: 6.4)$
$c_{217}$	0.99598	$0.9961^{+0.0028}_{-0.0029}$	$z_*$	1089.87	$1090.3^{+1.1}_{-1.0}$	$\chi_{\text{CMB}}^2$	11270.5	$11287.0 (\nu: 17.0)$
$H_0$	68.8	$65^{+7}_{-8}$	$r_*$	144.7	$144.5^{+5.1}_{-5.1}$			
$\Omega_\Lambda$	0.702	$0.656^{+0.078}_{-0.092}$	$100\theta_*$	1.04123	$1.0410^{+0.0014}_{-0.0014}$			

Best-fit  $\chi_{\text{eff}}^2 = 11272.54$ ;  $\bar{\chi}_{\text{eff}}^2 = 11294.43$ ;  $R - 1 = 0.00735$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.43 lowl.SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.53 plik\_dx11dr2\_HM\_v18.TT: 766.52

### 14.18 base\_nnu\_mnu\_plikHM\_TT\_lowTEB\_lensing\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02226	$0.02236^{+0.00054}_{-0.00052}$	$\Omega_m h^2$	0.1413	$0.1438^{+0.0090}_{-0.0085}$	$r_{\text{drag}}$	147.78	$146.6^{+4.8}_{-4.8}$
$\Omega_c h^2$	0.1182	$0.1199^{+0.0075}_{-0.0074}$	$\Omega_\nu h^2$	0.00084	$< 0.00347$	$k_D$	0.14012	$0.1410^{+0.0036}_{-0.0034}$
$100\theta_{\text{MC}}$	1.04104	$1.0409^{+0.0011}_{-0.0011}$	$\Omega_m h^3$	0.0956	$0.0980^{+0.0099}_{-0.0092}$	$100\theta_D$	0.16093	$0.1612^{+0.0012}_{-0.0012}$
$\tau$	0.0678	$0.077^{+0.040}_{-0.038}$	$\sigma_8$	0.8135	$0.810^{+0.031}_{-0.032}$	$z_{\text{eq}}$	3363	$3343^{+78}_{-84}$
$\Sigma m_\nu [\text{eV}]$	0.078	$< 0.323$	$\sigma_8 \Omega_m^{0.5}$	0.4519	$0.450^{+0.015}_{-0.015}$	$k_{\text{eq}}$	0.010255	$0.01029^{+0.00027}_{-0.00027}$
$N_{\text{eff}}$	3.03	$3.17^{+0.53}_{-0.50}$	$\sigma_8 \Omega_m^{0.25}$	0.6064	$0.604^{+0.020}_{-0.020}$	$100\theta_{\text{eq}}$	0.8200	$0.824^{+0.017}_{-0.015}$
$\ln(10^{10} A_s)$	3.065	$3.087^{+0.086}_{-0.078}$	$\sigma_8/h^{0.5}$	0.9890	$0.981^{+0.032}_{-0.034}$	$100\theta_{s,\text{eq}}$	0.4530	$0.4551^{+0.0086}_{-0.0076}$
$n_s$	0.9677	$0.973^{+0.021}_{-0.020}$	$\langle d^2 \rangle^{1/2}$	2.448	$2.447^{+0.051}_{-0.052}$	$r_{\text{drag}}/D_V(0.57)$	0.07177	$0.07171^{+0.00096}_{-0.00095}$
$y_{\text{cal}}$	1.00019	$1.0002^{+0.0049}_{-0.0048}$	$z_{\text{re}}$	9.00	$9.8^{+3.6}_{-3.4}$	$H(0.57)$	92.92	$93.7^{+3.3}_{-3.2}$
$A_{217}^{\text{CIB}}$	67.5	$65^{+10}_{-10}$	$10^9 A_s$	2.144	$2.19^{+0.19}_{-0.17}$	$D_A(0.57)$	1388	$1378^{+54}_{-52}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8724	$1.880^{+0.040}_{-0.042}$	$F_{\text{AP}}(0.57)$	0.67529	$0.6755^{+0.0046}_{-0.0044}$
$A_{143}^{\text{tSZ}}$	7.19	$4.9^{+4.0}_{-3.9}$	$D_{40}$	1226.2	$1222^{+31}_{-30}$	$f\sigma_8(0.57)$	0.4727	$0.472^{+0.015}_{-0.015}$
$A_{100}^{\text{PS}}$	254	$263^{+60}_{-60}$	$D_{220}$	5717	$5719^{+81}_{-80}$	$\sigma_8(0.57)$	0.6061	$0.603^{+0.025}_{-0.026}$
$A_{143}^{\text{PS}}$	39.0	$45^{+20}_{-20}$	$D_{810}$	2532.4	$2534^{+28}_{-27}$	$f_{2000}^{143}$	29.9	$31^{+7}_{-7}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$D_{1420}$	815.1	$814^{+10}_{-9.5}$	$f_{2000}^{143 \times 217}$	32.51	$33^{+5}_{-5}$
$A_{217}^{\text{PS}}$	96.8	$96^{+20}_{-20}$	$D_{2000}$	230.30	$229.5^{+4.3}_{-4.1}$	$f_{2000}^{217}$	106.05	$106.9^{+4.7}_{-4.7}$
$A^{\text{kSZ}}$	0.0	—	$n_{s,0.002}$	0.9677	$0.973^{+0.021}_{-0.020}$	$\chi^2_{\text{lensing}}$	9.29	$9.8 (\nu: 1.1)$
$A_{100}^{\text{dustTT}}$	7.47	$7.5^{+3.6}_{-3.7}$	$Y_{\text{P}}$	0.2451	$0.2470^{+0.0070}_{-0.0069}$	$\chi^2_{\text{lowTEB}}$	10495.01	$10495.6 (\nu: 1.6)$
$A_{143}^{\text{dustTT}}$	9.16	$9.1^{+3.5}_{-3.7}$	$Y_{\text{P}}^{\text{BBN}}$	0.2465	$0.2484^{+0.0070}_{-0.0069}$	$\chi^2_{\text{plik}}$	766.2	$780.7 (\nu: 16.2)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.3^{+8.1}_{-7.9}$	$10^5 \text{D}/\text{H}$	2.607	$2.64^{+0.13}_{-0.13}$	$\chi^2_{6\text{DF}}$	0.010	$0.070 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$\text{Age}/\text{Gyr}$	13.818	$13.71^{+0.47}_{-0.46}$	$\chi^2_{\text{MGS}}$	1.41	$1.42 (\nu: 0.2)$
$c_{100}$	0.99789	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1089.88	$1090.06^{+0.91}_{-0.94}$	$\chi^2_{\text{DR11CMass}}$	2.39	$3.01 (\nu: 0.4)$
$c_{217}$	0.99597	$0.9961^{+0.0028}_{-0.0029}$	$r_*$	145.07	$143.9^{+4.7}_{-4.6}$	$\chi^2_{\text{DR11LOWZ}}$	0.48	$0.74 (\nu: 0.2)$
$H_0$	67.66	$68.2^{+3.0}_{-2.9}$	$100\theta_*$	1.04126	$1.0410^{+0.0014}_{-0.0013}$	$\chi^2_{\text{prior}}$	2.1	$7.4 (\nu: 6.3)$
$\Omega_\Lambda$	0.6914	$0.690^{+0.017}_{-0.018}$	$D_A/\text{Gpc}$	13.932	$13.82^{+0.44}_{-0.43}$	$\chi^2_{\text{CMB}}$	11270.5	$11286.0 (\nu: 16.2)$
$\Omega_m$	0.3086	$0.310^{+0.018}_{-0.017}$	$z_{\text{drag}}$	1059.55	$1060.0^{+2.0}_{-1.8}$	$\chi^2_{\text{BAO}}$	4.29	$5.2 (\nu: 0.8)$

Best-fit  $\chi^2_{\text{eff}} = 11276.91$ ;  $\bar{\chi}^2_{\text{eff}} = 11298.71$ ;  $R - 1 = 0.02062$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.39 DR11LOWZ: 0.48 CMB - smica\_g30\_ftl\_full\_pp: 9.29 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.01 plik\_dx11dr2\_HM\_v18\_TT: 766.20

### 14.19 base\_nnu\_mnu\_plikHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022128	$0.02208^{+0.00048}_{-0.00048}$	$A_{100 \times 217}^{\text{dust}TE}$	0.306	$0.30^{+0.16}_{-0.16}$	Age/Gyr	13.975	$14.04^{+0.44}_{-0.43}$
$\Omega_c h^2$	0.1174	$0.1184^{+0.0060}_{-0.0057}$	$A_{143}^{\text{dust}TE}$	0.154	$0.16^{+0.11}_{-0.11}$	$z_*$	1089.85	$1090.07^{+0.82}_{-0.81}$
$100\theta_{\text{MC}}$	1.04103	$1.04087^{+0.00090}_{-0.00091}$	$A_{143 \times 217}^{\text{dust}TE}$	0.336	$0.34^{+0.16}_{-0.16}$	$r_*$	146.05	$145.6^{+3.6}_{-3.6}$
$\tau$	0.0616	$0.071^{+0.036}_{-0.034}$	$A_{217}^{\text{dust}TE}$	1.66	$1.68^{+0.50}_{-0.50}$	$100\theta_*$	1.04136	$1.0412^{+0.0011}_{-0.0011}$
$\Sigma m_\nu$ [eV]	0.094	$< 0.577$	$c_{100}$	0.99817	$0.9981^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	14.025	$13.98^{+0.34}_{-0.34}$
$N_{\text{eff}}$	2.899	$2.93^{+0.39}_{-0.38}$	$c_{217}$	0.99597	$0.9961^{+0.0029}_{-0.0028}$	$z_{\text{drag}}$	1059.06	$1059.1^{+1.6}_{-1.6}$
$\ln(10^{10} A_s)$	3.051	$3.071^{+0.073}_{-0.069}$	$H_0$	66.17	$64.8^{+4.2}_{-4.6}$	$r_{\text{drag}}$	148.82	$148.4^{+3.8}_{-3.8}$
$n_s$	0.9591	$0.959^{+0.019}_{-0.019}$	$\Omega_\Lambda$	0.679	$0.658^{+0.049}_{-0.057}$	$k_D$	0.13945	$0.1398^{+0.0028}_{-0.0027}$
$y_{\text{cal}}$	1.00001	$1.0003^{+0.0048}_{-0.0048}$	$\Omega_m$	0.321	$0.342^{+0.057}_{-0.049}$	$100\theta_D$	0.16064	$0.16074^{+0.00081}_{-0.00079}$
$A_{217}^{\text{CIB}}$	67.1	$64^{+10}_{-10}$	$\Omega_m h^2$	0.1405	$0.1431^{+0.0082}_{-0.0079}$	$z_{\text{eq}}$	3401	$3408^{+81}_{-80}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.07	—	$\Omega_\nu h^2$	0.00101	$< 0.00620$	$k_{\text{eq}}$	0.010276	$0.01033^{+0.00025}_{-0.00024}$
$A_{143}^{\text{tSZ}}$	7.31	$5.3^{+3.7}_{-3.8}$	$\Omega_m h^3$	0.0930	$0.0927^{+0.0079}_{-0.0074}$	$100\theta_{\text{eq}}$	0.8129	$0.812^{+0.016}_{-0.015}$
$A_{100}^{\text{PS}}$	256	$262^{+60}_{-50}$	$\sigma_8$	0.803	$0.778^{+0.056}_{-0.065}$	$100\theta_{\text{s,eq}}$	0.4494	$0.4487^{+0.0078}_{-0.0077}$
$A_{143}^{\text{PS}}$	38.6	$44^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4549	$0.454^{+0.014}_{-0.014}$	$r_{\text{drag}}/D_V(0.57)$	0.07112	$0.0701^{+0.0023}_{-0.0026}$
$A_{143 \times 217}^{\text{PS}}$	34	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6045	$0.594^{+0.026}_{-0.029}$	$H(0.57)$	91.72	$91.1^{+3.2}_{-3.2}$
$A_{217}^{\text{PS}}$	96.9	$97^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9873	$0.967^{+0.045}_{-0.053}$	$D_A(0.57)$	1412	$1433^{+76}_{-68}$
$A^{\text{kSZ}}$	0.00	$< 8.17$	$\langle d^2 \rangle^{1/2}$	2.461	$2.476^{+0.066}_{-0.063}$	$F_{\text{AP}}(0.57)$	0.6784	$0.684^{+0.014}_{-0.012}$
$A_{100}^{\text{dust}TT}$	7.44	$7.4^{+3.7}_{-3.6}$	$z_{\text{re}}$	8.40	$9.3^{+3.3}_{-3.5}$	$f\sigma_8(0.57)$	0.4700	$0.462^{+0.022}_{-0.025}$
$A_{143}^{\text{dust}TT}$	9.04	$9.0^{+3.6}_{-3.6}$	$10^9 A_s$	2.113	$2.16^{+0.16}_{-0.15}$	$\sigma_8(0.57)$	0.596	$0.574^{+0.050}_{-0.057}$
$A_{143 \times 217}^{\text{dust}TT}$	17.5	$17.2^{+8.1}_{-8.1}$	$10^9 A_s e^{-2\tau}$	1.8684	$1.873^{+0.034}_{-0.034}$	$f_{2000}^{143}$	29.2	$30^{+6}_{-6}$
$A_{217}^{\text{dust}TT}$	81.6	$82^{+10}_{-10}$	$D_{40}$	1239.8	$1241^{+30}_{-30}$	$f_{2000}^{143 \times 217}$	32.10	$33^{+4}_{-4}$
$A_{100}^{\text{dust}EE}$	0.0811	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5725	$5727^{+76}_{-77}$	$f_{2000}^{217}$	105.58	$106.1^{+4.0}_{-4.0}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0487	$0.0485^{+0.0098}_{-0.0097}$	$D_{810}$	2531.9	$2534^{+27}_{-27}$	$\chi^2_{\text{lensing}}$	9.61	$9.7 (\nu: 1.1)$
$A_{100 \times 217}^{\text{dust}EE}$	0.0999	$0.0997^{+0.064}_{-0.064}$	$D_{1420}$	815.1	$815.2^{+9.5}_{-9.4}$	$\chi^2_{\text{lowTEB}}$	10496.34	$10497.4 (\nu: 1.9)$
$A_{143}^{\text{dust}EE}$	0.09997	$0.0999^{+0.013}_{-0.013}$	$D_{2000}$	230.60	$230.3^{+3.6}_{-3.6}$	$\chi^2_{\text{plik}}$	2433.9	$2454.2 (\nu: 23.9)$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.225^{+0.091}_{-0.092}$	$n_{\text{s},0.002}$	0.9591	$0.959^{+0.019}_{-0.019}$	$\chi^2_{\text{prior}}$	7.0	$19.2 (\nu: 15.1)$
$A_{217}^{\text{dust}EE}$	0.654	$0.65^{+0.26}_{-0.25}$	$Y_{\text{P}}$	0.2433	$0.2437^{+0.0054}_{-0.0055}$	$\chi^2_{\text{CMB}}$	12939.9	$12961.3 (\nu: 23.8)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.075}_{-0.073}$	$Y_{\text{P}}^{\text{BBN}}$	0.2446	$0.2450^{+0.0055}_{-0.0055}$			
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.057}_{-0.057}$	$10^5 \text{D/H}$	2.586	$2.607^{+0.097}_{-0.091}$			

Best-fit  $\chi^2_{\text{eff}} = 12946.85$ ;  $\bar{\chi}^2_{\text{eff}} = 12980.54$ ;  $R - 1 = 0.01047$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.61 lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.34 plik\_dx11dr2\_HM\_v18.TTTEEE: 2433.94

## 14.20 base\_nnu\_mnu\_plikHM\_TTTEEE\_lowTEB\_lensing\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022169	$0.02224^{+0.00040}_{-0.00040}$	$A_{143}^{\text{dust}TE}$	0.156	$0.15^{+0.11}_{-0.10}$	$r_*$	146.09	$145.4^{+3.4}_{-3.4}$
$\Omega_c h^2$	0.1170	$0.1179^{+0.0055}_{-0.0058}$	$A_{143 \times 217}^{\text{dust}TE}$	0.338	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04142	$1.0413^{+0.0011}_{-0.0011}$
$100\theta_{\text{MC}}$	1.04116	$1.04101^{+0.00088}_{-0.00088}$	$A_{217}^{\text{dust}TE}$	1.66	$1.67^{+0.51}_{-0.50}$	$D_A/\text{Gpc}$	14.028	$13.97^{+0.32}_{-0.32}$
$\tau$	0.0576	$0.067^{+0.031}_{-0.028}$	$c_{100}$	0.99821	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.13	$1059.4^{+1.5}_{-1.4}$
$\Sigma m_\nu [\text{eV}]$	0.002	$< 0.222$	$c_{217}$	0.99596	$0.9960^{+0.0028}_{-0.0029}$	$r_{\text{drag}}$	148.84	$148.1^{+3.6}_{-3.5}$
$N_{\text{eff}}$	2.905	$2.99^{+0.37}_{-0.34}$	$H_0$	67.18	$67.1^{+2.3}_{-2.3}$	$k_D$	0.13942	$0.1399^{+0.0026}_{-0.0025}$
$\ln(10^{10} A_s)$	3.042	$3.064^{+0.063}_{-0.057}$	$\Omega_\Lambda$	0.6915	$0.687^{+0.017}_{-0.016}$	$100\theta_D$	0.16063	$0.16079^{+0.00078}_{-0.00076}$
$n_s$	0.9610	$0.964^{+0.016}_{-0.015}$	$\Omega_m$	0.3085	$0.313^{+0.016}_{-0.017}$	$z_{\text{eq}}$	3390	$3375^{+57}_{-61}$
$y_{\text{cal}}$	0.99975	$1.0002^{+0.0048}_{-0.0049}$	$\Omega_m h^2$	0.1392	$0.1411^{+0.0065}_{-0.0060}$	$k_{\text{eq}}$	0.010249	$0.01026^{+0.00022}_{-0.00022}$
$A_{217}^{\text{CIB}}$	65.3	$64^{+10}_{-10}$	$\Omega_\nu h^2$	0.00002	$< 0.00239$	$100\theta_{\text{eq}}$	0.8149	$0.818^{+0.012}_{-0.011}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.24	—	$\Omega_m h^3$	0.0935	$0.0947^{+0.0070}_{-0.0066}$	$100\theta_{\text{s,eq}}$	0.4503	$0.4519^{+0.0061}_{-0.0055}$
$A_{143}^{\text{tSZ}}$	7.18	$5.3^{+3.7}_{-3.9}$	$\sigma_8$	0.8174	$0.809^{+0.026}_{-0.027}$	$r_{\text{drag}}/D_V(0.57)$	0.07177	$0.07151^{+0.00083}_{-0.00087}$
$A_{100}^{\text{PS}}$	253	$261^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4540	$0.453^{+0.012}_{-0.013}$	$H(0.57)$	92.25	$92.5^{+2.5}_{-2.4}$
$A_{143}^{\text{PS}}$	41.1	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6092	$0.605^{+0.016}_{-0.017}$	$D_A(0.57)$	1397.7	$1397^{+42}_{-41}$
$A_{143 \times 217}^{\text{PS}}$	39.0	$39^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9973	$0.987^{+0.026}_{-0.026}$	$F_{\text{AP}}(0.57)$	0.67526	$0.6765^{+0.0042}_{-0.0042}$
$A_{217}^{\text{PS}}$	99.6	$97^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4556	$2.456^{+0.048}_{-0.046}$	$f\sigma_8(0.57)$	0.4734	$0.471^{+0.013}_{-0.013}$
$A^{\text{kSZ}}$	0.00	$< 8.09$	$z_{\text{re}}$	7.99	$8.9^{+2.8}_{-2.8}$	$\sigma_8(0.57)$	0.6083	$0.601^{+0.022}_{-0.022}$
$A_{100}^{\text{dust}TT}$	7.43	$7.4^{+3.8}_{-3.6}$	$10^9 A_s$	2.094	$2.14^{+0.14}_{-0.13}$	$f_{2000}^{143}$	28.7	$30^{+6}_{-6}$
$A_{143}^{\text{dust}TT}$	9.06	$9.0^{+3.6}_{-3.4}$	$10^9 A_s e^{-2\tau}$	1.8664	$1.872^{+0.033}_{-0.034}$	$f_{2000}^{143 \times 217}$	31.76	$32^{+4}_{-4}$
$A_{143 \times 217}^{\text{dust}TT}$	18.0	$17.1^{+7.8}_{-7.8}$	$D_{40}$	1233.7	$1234^{+26}_{-26}$	$f_{2000}^{217}$	105.25	$105.8^{+3.8}_{-4.0}$
$A_{217}^{\text{dust}TT}$	82.4	$82^{+10}_{-10}$	$D_{220}$	5721	$5729^{+75}_{-74}$	$\chi^2_{\text{lensing}}$	9.89	$10.1 (\nu: 1.4)$
$A_{100}^{\text{dust}EE}$	0.0811	$0.082^{+0.011}_{-0.011}$	$D_{810}$	2530.9	$2533^{+26}_{-27}$	$\chi^2_{\text{lowTEB}}$	10495.97	$10496.3 (\nu: 1.1)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0488	$0.0491^{+0.0099}_{-0.0098}$	$D_{1420}$	815.2	$815.3^{+9.7}_{-9.5}$	$\chi^2_{\text{plik}}$	2434.3	$2453.9 (\nu: 23.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.0998	$0.099^{+0.067}_{-0.064}$	$D_{2000}$	230.79	$230.5^{+3.6}_{-3.6}$	$\chi^2_{6\text{DF}}$	0.010	$0.09 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1002	$0.100^{+0.013}_{-0.013}$	$n_{\text{s},0.002}$	0.9610	$0.964^{+0.016}_{-0.015}$	$\chi^2_{\text{MGS}}$	1.41	$1.16 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.225	$0.224^{+0.091}_{-0.091}$	$Y_{\text{P}}$	0.2434	$0.2445^{+0.0051}_{-0.0049}$	$\chi^2_{\text{DR11CMass}}$	2.40	$3.07 (\nu: 0.4)$
$A_{217}^{\text{dust}EE}$	0.656	$0.66^{+0.26}_{-0.27}$	$Y_{\text{P}}^{\text{BBN}}$	0.2447	$0.2458^{+0.0051}_{-0.0049}$	$\chi^2_{\text{DR11LOWZ}}$	0.48	$0.99 (\nu: 0.3)$
$A_{100}^{\text{dust}TE}$	0.141	$0.142^{+0.078}_{-0.071}$	$10^5 \text{D}/\text{H}$	2.580	$2.594^{+0.089}_{-0.087}$	$\chi^2_{\text{prior}}$	6.7	$19.4 (\nu: 15.0)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.131^{+0.057}_{-0.059}$	$\text{Age}/\text{Gyr}$	13.918	$13.88^{+0.35}_{-0.35}$	$\chi^2_{\text{CMB}}$	12940.2	$12960.3 (\nu: 21.3)$
$A_{100 \times 217}^{\text{dust}TE}$	0.304	$0.31^{+0.16}_{-0.16}$	$z_*$	1089.77	$1089.83^{+0.67}_{-0.64}$	$\chi^2_{\text{BAO}}$	4.29	$5.3 (\nu: 0.9)$

Best-fit  $\chi^2_{\text{eff}} = 12951.19$ ;  $\bar{\chi}^2_{\text{eff}} = 12985.02$ ;  $R - 1 = 0.04453$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.40 DR11LOWZ: 0.48 CMB - smica\_g30\_ftl\_full\_pp: 9.88 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.97 plik\_dx11dr2\_HM\_v18\_TTT

## 14.21 base\_nnu\_mnu\_CamSpecHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02235	$0.02213^{+0.00082}_{-0.00080}$ (+0.0 $\sigma$ )	$\beta_1^1$	-0.09	$-0.1^{+2.0}_{-2.0}$	$r_*$	144.2	$144.7^{+5.4}_{-5.3}$ (+0.1 $\sigma$ )
$\Omega_c h^2$	0.1193	$0.1196^{+0.0079}_{-0.0076}$ (-0.1 $\sigma$ )	$H_0$	69.3	$65^{+7}_{-8}$ (+0.0 $\sigma$ )	$100\theta_*$	1.04114	$1.0411^{+0.0014}_{-0.0014}$ (+0.1 $\sigma$ )
$100\theta_{MC}$	1.04103	$1.0408^{+0.0012}_{-0.0012}$ (+0.1 $\sigma$ )	$\Omega_\Lambda$	0.705	$0.658^{+0.078}_{-0.092}$ (+0.1 $\sigma$ )	$z_{drag}$	1059.89	$1059.4^{+2.6}_{-2.6}$ (-0.0 $\sigma$ )
$\tau$	0.0683	$0.078^{+0.042}_{-0.041}$ (+0.1 $\sigma$ )	$\Omega_m$	0.295	$0.342^{+0.092}_{-0.078}$ (-0.1 $\sigma$ )	$r_{drag}$	146.8	$147.5^{+5.6}_{-5.6}$ (+0.1 $\sigma$ )
$\Sigma m_\nu$ [eV]	0.000	< 0.668 (-0.1 $\sigma$ )	$\Omega_m h^2$	0.1416	$0.145^{+0.010}_{-0.0097}$ (-0.1 $\sigma$ )	$k_D$	0.14078	$0.1404^{+0.0040}_{-0.0039}$ (-0.1 $\sigma$ )
$N_{eff}$	3.14	$3.04^{+0.65}_{-0.60}$ (-0.1 $\sigma$ )	$\Omega_\nu h^2$	0.00000	< 0.00719 (-0.1 $\sigma$ )	$100\theta_D$	0.16118	$0.1610^{+0.0014}_{-0.0013}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.067	$3.086^{+0.091}_{-0.082}$ (+0.0 $\sigma$ )	$\Omega_m h^3$	0.0981	$0.095^{+0.014}_{-0.012}$ (-0.1 $\sigma$ )	$z_{eq}$	3341	$3390^{+160}_{-150}$ (-0.0 $\sigma$ )
$n_s$	0.9737	$0.966^{+0.033}_{-0.032}$ (+0.1 $\sigma$ )	$\sigma_8$	0.831	$0.780^{+0.078}_{-0.089}$ (+0.1 $\sigma$ )	$100\theta_{eq}$	0.8246	$0.815^{+0.030}_{-0.029}$ (+0.0 $\sigma$ )
$y_{cal}$	1.00002	$1.0003^{+0.0049}_{-0.0048}$ (+0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4514	$0.454^{+0.018}_{-0.018}$ (+0.0 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07252	$0.0702^{+0.0037}_{-0.0041}$ (+0.1 $\sigma$ )
$A_{100}^{PS}$	253.3	$248^{+50}_{-50}$ (-0.5 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6125	$0.594^{+0.031}_{-0.035}$ (+0.1 $\sigma$ )	$H(0.57)$	94.2	$91.9^{+5.8}_{-5.5}$ (-0.0 $\sigma$ )
$A_{143}^{PS}$	36.4	$40^{+20}_{-20}$ (-0.7 $\sigma$ )	$\sigma_8/h^{0.5}$	0.998	$0.964^{+0.052}_{-0.061}$ (+0.1 $\sigma$ )	$D_A(0.57)$	1362	$1422^{+130}_{-130}$ (-0.0 $\sigma$ )
$A_{217}^{PS}$	93.6	$97^{+30}_{-30}$ (+0.0 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.439	$2.470^{+0.086}_{-0.081}$ (-0.1 $\sigma$ )	$F_{AP}(0.57)$	0.6718	$0.683^{+0.022}_{-0.019}$ (-0.1 $\sigma$ )
$A_{217}^{CIB}$	48.0	$47^{+10}_{-10}$ (-2.7 $\sigma$ )	$z_{re}$	9.05	$9.96^{+3.7}_{-3.8}$ (+0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4776	$0.462^{+0.028}_{-0.033}$ (+0.1 $\sigma$ )
$A_{143}^{tSZ}$	2.63	< 6.54 (-0.9 $\sigma$ )	$10^9 A_s$	2.148	$2.19^{+0.20}_{-0.19}$ (+0.0 $\sigma$ )	$\sigma_8(0.57)$	0.622	$0.575^{+0.072}_{-0.081}$ (+0.1 $\sigma$ )
$r_{143 \times 217}^{PS}$	0.395	$0.51^{+0.22}_{-0.20}$	$10^9 A_s e^{-2\tau}$	1.8732	$1.873^{+0.041}_{-0.044}$ (-0.3 $\sigma$ )	$Y_P^{BBN}$	0.2476	$0.2461^{+0.0088}_{-0.0086}$ (-0.2 $\sigma$ )
$\xi^{tSZ \times CIB}$	0.00	—	$D_{40}$	1213.5	$1225^{+42}_{-41}$ (-0.3 $\sigma$ )	$f_{2000}^{143}$	30.4	$30^{+7}_{-7}$ (-0.5 $\sigma$ )
$A^{kSZ}$	6.4	—	$D_{220}$	5698	$5694^{+82}_{-80}$ (-0.5 $\sigma$ )	$f_{2000}^{217}$	107.44	$107.1^{+4.7}_{-4.7}$ (+0.0 $\sigma$ )
$A_{100}^{dust}$	0.987	$0.99^{+0.38}_{-0.38}$	$D_{810}$	2527.4	$2530^{+28}_{-28}$ (-0.3 $\sigma$ )	$f_{2000}^{143 \times 217}$	32.7	$33^{+5}_{-5}$ (-0.4 $\sigma$ )
$A_{143}^{dust}$	1.022	$1.03^{+0.36}_{-0.36}$	$D_{1420}$	813.0	$814^{+10}_{-10}$ (+0.0 $\sigma$ )	$\chi_{lensing}^2$	9.23	9.5 ( $\nu$ : 0.9) (-0.0 $\sigma$ )
$A_{217}^{dust}$	1.225	$1.21^{+0.23}_{-0.23}$	$n_{s,0.002}$	0.9737	$0.966^{+0.033}_{-0.032}$ (+0.1 $\sigma$ )	$\chi_{lowTEB}^2$	10494.07	10496.5 ( $\nu$ : 3.1) (-0.2 $\sigma$ )
$A_{143 \times 217}^{dust}$	0.963	$0.98^{+0.35}_{-0.35}$	$Y_P$	0.2463	$0.2447^{+0.0087}_{-0.0086}$ (-0.2 $\sigma$ )	$\chi_{CamSpec}^2$	8047.1	8062.2 ( $\nu$ : 18.0)
$c_{100}$	0.99660	$0.9967^{+0.0019}_{-0.0019}$ (-1.5 $\sigma$ )	Age/Gyr	13.66	$13.94^{+0.77}_{-0.74}$ (+0.0 $\sigma$ )	$\chi_{prior}^2$	3.9	8.5 ( $\nu$ : 6.1) (+0.3 $\sigma$ )
$c_{217}$	0.99769	$0.9974^{+0.0035}_{-0.0035}$ (+0.9 $\sigma$ )	$z_*$	1089.95	$1090.2^{+1.2}_{-1.0}$ (-0.2 $\sigma$ )	$\chi_{CMB}^2$	18550.4	18568.2 ( $\nu$ : 18.9) (+1248.8 $\sigma$ )

Best-fit  $\chi_{eff}^2 = 18554.22$ ;  $\Delta\chi_{eff}^2 = 7281.69$ ;  $\bar{\chi}_{eff}^2 = 18576.74$ ;  $\Delta\bar{\chi}_{eff}^2 = 7282.31$ ;  $R - 1 = 0.00693$

$\chi_{eff}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.23 ( $\Delta$  -0.20) low1\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.07 ( $\Delta$  -0.46) CamSpec like\_v9.10CMH\_unified: 8047.06



## 14.22 base\_nnu\_mnu\_CamSpecHM\_TT\_lowTEB\_lensing\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00052}_{-0.00050} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.690^{+0.018}_{-0.018} \quad (-0.0\sigma)$	$k_D$	$0.1408^{+0.0035}_{-0.0035} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1194^{+0.0079}_{-0.0074} \quad (-0.1\sigma)$	$\Omega_m$	$0.310^{+0.018}_{-0.018} \quad (+0.0\sigma)$	$100\theta_D$	$0.1611^{+0.0013}_{-0.0012} \quad (-0.2\sigma)$
$100\theta_{MC}$	$1.0409^{+0.0011}_{-0.0011} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1432^{+0.0089}_{-0.0088} \quad (-0.1\sigma)$	$z_{eq}$	$3346^{+80}_{-83} \quad (+0.1\sigma)$
$\tau$	$0.077^{+0.038}_{-0.037} \quad (+0.1\sigma)$	$\Omega_\nu h^2$	$< 0.00335 \quad (-0.1\sigma)$	$100\theta_{eq}$	$0.824^{+0.017}_{-0.016} \quad (-0.1\sigma)$
$\Sigma m_\nu [\text{eV}]$	$< 0.311 \quad (-0.1\sigma)$	$\Omega_m h^3$	$0.0974^{+0.0098}_{-0.0096} \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.07171^{+0.00097}_{-0.00094} \quad (+0.0\sigma)$
$N_{eff}$	$3.14^{+0.53}_{-0.51} \quad (-0.1\sigma)$	$\sigma_8$	$0.811^{+0.031}_{-0.032} \quad (+0.1\sigma)$	$H(0.57)$	$93.5^{+3.4}_{-3.3} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.085^{+0.082}_{-0.077} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.015}_{-0.015} \quad (+0.1\sigma)$	$D_A(0.57)$	$1381^{+53}_{-55} \quad (+0.1\sigma)$
$n_s$	$0.974^{+0.021}_{-0.020} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.019}_{-0.020} \quad (+0.1\sigma)$	$F_{AP}(0.57)$	$0.6755^{+0.0046}_{-0.0045} \quad (+0.0\sigma)$
$y_{cal}$	$1.0002^{+0.0049}_{-0.0050} \quad (+0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.984^{+0.030}_{-0.034} \quad (+0.2\sigma)$	$f\sigma_8(0.57)$	$0.472^{+0.015}_{-0.015} \quad (+0.1\sigma)$
$A_{100}^{PS}$	$247^{+50}_{-50} \quad (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.052}_{-0.053} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.604^{+0.026}_{-0.026} \quad (+0.1\sigma)$
$A_{143}^{PS}$	$40^{+20}_{-20} \quad (-0.7\sigma)$	$z_{re}$	$9.9^{+3.5}_{-3.3} \quad (+0.0\sigma)$	$Y_P^{BBN}$	$0.2475^{+0.0071}_{-0.0069} \quad (-0.3\sigma)$
$A_{217}^{PS}$	$97^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s$	$2.19^{+0.18}_{-0.17} \quad (-0.0\sigma)$	$f_{2000}^{143}$	$30^{+6}_{-7} \quad (-0.5\sigma)$
$A_{217}^{CIB}$	$47^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.040}_{-0.041} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$107.0^{+4.6}_{-4.5} \quad (+0.1\sigma)$
$A_{143}^{tSZ}$	$< 6.47 \quad (-0.9\sigma)$	$D_{40}$	$1217^{+29}_{-30} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-5} \quad (-0.4\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.22}_{-0.20}$	$D_{220}$	$5698^{+81}_{-79} \quad (-0.5\sigma)$	$\chi_{lensing}^2$	$9.7 \quad (\nu: 0.9) \quad (-0.1\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{810}$	$2530^{+28}_{-28} \quad (-0.3\sigma)$	$\chi_{lowTEB}^2$	$10495.3 \quad (\nu: 1.5) \quad (-0.2\sigma)$
$A^{kSZ}$	—	$D_{1420}$	$814^{+10}_{-10} \quad (+0.0\sigma)$	$\chi_{CamSpec}^2$	$8062.2 \quad (\nu: 17.4)$
$A_{100}^{dust}$	$0.995^{+0.36}_{-0.38}$	$n_{s,0.002}$	$0.974^{+0.021}_{-0.020} \quad (+0.1\sigma)$	$\chi_{6DF}^2$	$0.071 \quad (\nu: 0.0) \quad (+0.0\sigma)$
$A_{143}^{dust}$	$1.03^{+0.36}_{-0.37}$	$Y_P$	$0.2461^{+0.0071}_{-0.0069} \quad (-0.3\sigma)$	$\chi_{MGS}^2$	$1.42 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$A_{217}^{dust}$	$1.21^{+0.22}_{-0.23}$	$\text{Age/Gyr}$	$13.74^{+0.45}_{-0.47} \quad (+0.1\sigma)$	$\chi_{DR11CMass}^2$	$3.01 \quad (\nu: 0.4) \quad (+0.0\sigma)$
$A_{143 \times 217}^{dust}$	$0.99^{+0.36}_{-0.35}$	$z_*$	$1089.98^{+0.97}_{-0.93} \quad (-0.1\sigma)$	$\chi_{DR11LOWZ}^2$	$0.74 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$c_{100}$	$0.9967^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$r_*$	$144.2^{+4.5}_{-4.7} \quad (+0.1\sigma)$	$\chi_{prior}^2$	$8.5 \quad (\nu: 6.5) \quad (+0.3\sigma)$
$c_{217}$	$0.9974^{+0.0035}_{-0.0034} \quad (+0.9\sigma)$	$100\theta_*$	$1.0411^{+0.0014}_{-0.0013} \quad (+0.1\sigma)$	$\chi_{CMB}^2$	$18567.1 \quad (\nu: 17.4) \quad (+1280.7\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{drag}$	$1059.9^{+1.9}_{-1.8} \quad (-0.1\sigma)$	$\chi_{BAO}^2$	$5.2 \quad (\nu: 0.8) \quad (+0.0\sigma)$
$H_0$	$68.0^{+3.1}_{-2.9} \quad (-0.1\sigma)$	$r_{drag}$	$146.9^{+4.7}_{-4.9} \quad (+0.1\sigma)$		

$$\bar{\chi}_{eff}^2 = 18580.89; \Delta\chi_{eff}^2 = 7282.17; R - 1 = 0.01144$$

### 14.23 base\_nnu\_mnu\_CamSpecHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022146	$0.02212^{+0.00047}_{-0.00047}$ (+0.2 $\sigma$ )	$\mathcal{C}_{EE}$	0.9989	$0.9986^{+0.0094}_{-0.0093}$	$r_*$	147.04	$146.9^{+3.9}_{-3.9}$ (+0.7 $\sigma$ )
$\Omega_c h^2$	0.1156	$0.1159^{+0.0063}_{-0.0060}$ (-0.8 $\sigma$ )	$\beta_1^1$	-0.06	$-0.1^{+1.9}_{-2.0}$	$100\theta_*$	1.04163	$1.0416^{+0.0012}_{-0.0011}$ (+0.7 $\sigma$ )
$100\theta_{MC}$	1.04123	$1.04116^{+0.00095}_{-0.00094}$ (+0.6 $\sigma$ )	$H_0$	65.62	$64.6^{+4.2}_{-4.6}$ (-0.1 $\sigma$ )	$z_{drag}$	1058.87	$1058.9^{+1.7}_{-1.6}$ (-0.3 $\sigma$ )
$\tau$	0.0645	$0.071^{+0.033}_{-0.032}$ (-0.0 $\sigma$ )	$\Omega_\Lambda$	0.6776	$0.663^{+0.045}_{-0.053}$ (+0.2 $\sigma$ )	$r_{drag}$	149.82	$149.7^{+4.1}_{-4.1}$ (+0.7 $\sigma$ )
$\Sigma m_\nu$ [eV]	0.103	< 0.495 (-0.2 $\sigma$ )	$\Omega_m$	0.3224	$0.337^{+0.053}_{-0.045}$ (-0.2 $\sigma$ )	$k_D$	0.13884	$0.1390^{+0.0029}_{-0.0028}$ (-0.6 $\sigma$ )
$N_{eff}$	2.800	$2.81^{+0.42}_{-0.40}$ (-0.7 $\sigma$ )	$\Omega_m h^2$	0.1388	$0.1403^{+0.0079}_{-0.0076}$ (-0.7 $\sigma$ )	$100\theta_D$	0.16029	$0.16030^{+0.00095}_{-0.00092}$ (-1.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.050	$3.062^{+0.068}_{-0.065}$ (-0.3 $\sigma$ )	$\Omega_\nu h^2$	0.00111	< 0.00532 (-0.2 $\sigma$ )	$z_{eq}$	3404	$3410^{+83}_{-79}$ (+0.0 $\sigma$ )
$n_s$	0.9583	$0.958^{+0.019}_{-0.019}$ (-0.1 $\sigma$ )	$\Omega_m h^3$	0.0911	$0.0906^{+0.0085}_{-0.0077}$ (-0.5 $\sigma$ )	$100\theta_{eq}$	0.8125	$0.812^{+0.015}_{-0.015}$ (-0.0 $\sigma$ )
$y_{cal}$	1.00044	$1.0003^{+0.0050}_{-0.0048}$ (-0.0 $\sigma$ )	$\sigma_8$	0.797	$0.779^{+0.053}_{-0.061}$ (+0.0 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07106	$0.0704^{+0.0022}_{-0.0024}$ (+0.2 $\sigma$ )
$A_{100}^{PS}$	241.8	$241^{+40}_{-50}$ (-0.7 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4526	$0.451^{+0.013}_{-0.013}$ (-0.4 $\sigma$ )	$H(0.57)$	91.06	$90.6^{+3.5}_{-3.4}$ (-0.4 $\sigma$ )
$A_{143}^{PS}$	33.1	$36^{+20}_{-20}$ (-0.9 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6007	$0.593^{+0.024}_{-0.027}$ (-0.1 $\sigma$ )	$D_A(0.57)$	1423	$1440^{+80}_{-71}$ (+0.2 $\sigma$ )
$A_{217}^{PS}$	99.2	$99^{+30}_{-30}$ (+0.2 $\sigma$ )	$\sigma_8/h^{0.5}$	0.9841	$0.969^{+0.041}_{-0.048}$ (+0.1 $\sigma$ )	$F_{AP}(0.57)$	0.6788	$0.682^{+0.013}_{-0.011}$ (-0.2 $\sigma$ )
$A_{217}^{CIB}$	46.1	$45^{+10}_{-10}$ (-3.0 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.459	$2.468^{+0.065}_{-0.058}$ (-0.3 $\sigma$ )	$f\sigma_8(0.57)$	0.4671	$0.460^{+0.021}_{-0.023}$ (-0.1 $\sigma$ )
$A_{143}^{tSZ}$	4.32	< 6.97 (-0.9 $\sigma$ )	$z_{re}$	8.64	$9.2^{+3.0}_{-3.2}$ (-0.1 $\sigma$ )	$\sigma_8(0.57)$	0.591	$0.575^{+0.047}_{-0.053}$ (+0.0 $\sigma$ )
$r_{143 \times 217}^{PS}$	0.441	$0.52^{+0.24}_{-0.22}$	$10^9 A_s$	2.112	$2.14^{+0.15}_{-0.14}$ (-0.3 $\sigma$ )	$Y_P^{BBN}$	0.2428	$0.2429^{+0.0059}_{-0.0058}$ (-0.8 $\sigma$ )
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8562	$1.856^{+0.037}_{-0.036}$ (-1.0 $\sigma$ )	$f_{2000}^{143}$	27.4	$27^{+6}_{-6}$ (-0.9 $\sigma$ )
$A^{kSZ}$	3.3	—	$D_{40}$	1236.1	$1236^{+29}_{-29}$ (-0.3 $\sigma$ )	$f_{2000}^{217}$	105.32	$105.3^{+4.2}_{-4.1}$ (-0.4 $\sigma$ )
$A_{100}^{dust}$	0.975	$0.98^{+0.38}_{-0.38}$	$D_{220}$	5712	$5709^{+76}_{-76}$ (-0.5 $\sigma$ )	$f_{2000}^{143 \times 217}$	30.29	$30^{+5}_{-4}$ (-1.0 $\sigma$ )
$A_{143}^{dust}$	1.027	$1.02^{+0.36}_{-0.36}$	$D_{810}$	2527.8	$2528^{+27}_{-27}$ (-0.5 $\sigma$ )	$\chi^2_{lensing}$	9.06	9.4 ( $\nu$ : 0.7) (-0.2 $\sigma$ )
$A_{217}^{dust}$	1.224	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	816.4	$816.4^{+9.7}_{-9.7}$ (+0.2 $\sigma$ )	$\chi^2_{lowTEB}$	10496.07	10497.0 ( $\nu$ : 1.9) (-0.2 $\sigma$ )
$A_{143 \times 217}^{dust}$	0.980	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	0.9583	$0.958^{+0.019}_{-0.019}$ (-0.1 $\sigma$ )	$\chi^2_{CamSpec}$	12935.5	12952.8 ( $\nu$ : 19.1)
$c_{100}$	0.99674	$0.9968^{+0.0019}_{-0.0019}$ (-1.8 $\sigma$ )	$Y_P$	0.2415	$0.2415^{+0.0059}_{-0.0057}$ (-0.8 $\sigma$ )	$\chi^2_{prior}$	3.6	9.1 ( $\nu$ : 6.3) (-1.8 $\sigma$ )
$c_{217}$	0.99697	$0.9969^{+0.0035}_{-0.0035}$ (+0.6 $\sigma$ )	Age/Gyr	14.074	$14.13^{+0.49}_{-0.47}$ (+0.4 $\sigma$ )	$\chi^2_{CMB}$	23440.7	23459.2 ( $\nu$ : 19.4) (+1520.8 $\sigma$ )
$c_{TE}$	1.0041	$1.0043^{+0.0088}_{-0.0089}$	$z_*$	1089.55	$1089.65^{+0.83}_{-0.78}$ (-1.0 $\sigma$ )			

Best-fit  $\chi^2_{eff} = 23444.28$ ;  $\Delta\chi^2_{eff} = 10497.43$ ;  $\bar{\chi}^2_{eff} = 23468.27$ ;  $\Delta\bar{\chi}^2_{eff} = 10487.73$ ;  $R - 1 = 0.00893$

$\chi^2_{eff}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.06 ( $\Delta$  -0.55) lowl.SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10496.07 ( $\Delta$  -0.27) CamSpec like\_v9.10CMH.unified: 12935.55

## 14.24 base\_nnu\_mnu\_CamSpecHM\_TTTEEE\_lowTEB\_lensing\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02227^{+0.00039}_{-0.00038} \quad (+0.1\sigma)$	$H_0$	$66.6^{+2.5}_{-2.4} \quad (-0.4\sigma)$	$k_D$	$0.1393^{+0.0028}_{-0.0027} \quad (-0.5\sigma)$
$\Omega_c h^2$	$0.1159^{+0.0063}_{-0.0063} \quad (-0.7\sigma)$	$\Omega_\Lambda$	$0.687^{+0.016}_{-0.017} \quad (+0.0\sigma)$	$100\theta_D$	$0.16040^{+0.00094}_{-0.00086} \quad (-1.0\sigma)$
$100\theta_{MC}$	$1.04123^{+0.00093}_{-0.00089} \quad (+0.5\sigma)$	$\Omega_m$	$0.313^{+0.017}_{-0.016} \quad (-0.0\sigma)$	$z_{eq}$	$3380^{+58}_{-56} \quad (+0.2\sigma)$
$\tau$	$0.068^{+0.029}_{-0.028} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1390^{+0.0070}_{-0.0065} \quad (-0.6\sigma)$	$100\theta_{eq}$	$0.817^{+0.011}_{-0.011} \quad (-0.1\sigma)$
$\Sigma m_\nu$ [eV]	$< 0.202 \quad (-0.1\sigma)$	$\Omega_\nu h^2$	$< 0.00217 \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.07154^{+0.00083}_{-0.00085} \quad (+0.1\sigma)$
$N_{eff}$	$2.87^{+0.39}_{-0.38} \quad (-0.6\sigma)$	$\Omega_m h^3$	$0.0927^{+0.0076}_{-0.0069} \quad (-0.6\sigma)$	$H(0.57)$	$91.8^{+2.8}_{-2.6} \quad (-0.5\sigma)$
$\ln(10^{10} A_s)$	$3.058^{+0.061}_{-0.058} \quad (-0.2\sigma)$	$\sigma_8$	$0.804^{+0.027}_{-0.028} \quad (-0.3\sigma)$	$D_A(0.57)$	$1407^{+46}_{-46} \quad (+0.5\sigma)$
$n_s$	$0.963^{+0.016}_{-0.015} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.013}_{-0.012} \quad (-0.4\sigma)$	$F_{AP}(0.57)$	$0.6764^{+0.0042}_{-0.0040} \quad (-0.0\sigma)$
$y_{cal}$	$1.0003^{+0.0050}_{-0.0048} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.602^{+0.017}_{-0.017} \quad (-0.4\sigma)$	$f\sigma_8(0.57)$	$0.469^{+0.013}_{-0.013} \quad (-0.4\sigma)$
$A_{100}^{PS}$	$241^{+40}_{-40} \quad (-0.7\sigma)$	$\sigma_8/h^{0.5}$	$0.985^{+0.025}_{-0.026} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.598^{+0.022}_{-0.023} \quad (-0.3\sigma)$
$A_{143}^{PS}$	$36^{+20}_{-20} \quad (-0.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.452^{+0.050}_{-0.051} \quad (-0.2\sigma)$	$Y_P^{BBN}$	$0.2439^{+0.0054}_{-0.0054} \quad (-0.8\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} \quad (+0.2\sigma)$	$z_{re}$	$8.9^{+2.8}_{-2.7} \quad (+0.0\sigma)$	$f_{2000}^{143}$	$27^{+6}_{-6} \quad (-0.8\sigma)$
$A_{217}^{CIB}$	$45^{+10}_{-10} \quad (-3.0\sigma)$	$10^9 A_s$	$2.13^{+0.13}_{-0.12} \quad (-0.2\sigma)$	$f_{2000}^{217}$	$105.2^{+4.2}_{-4.1} \quad (-0.3\sigma)$
$A_{143}^{tSZ}$	$< 7.02 \quad (-0.9\sigma)$	$10^9 A_s e^{-2\tau}$	$1.857^{+0.037}_{-0.037} \quad (-0.8\sigma)$	$f_{2000}^{143 \times 217}$	$30^{+5}_{-4} \quad (-0.9\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.24}_{-0.22}$	$D_{40}$	$1229^{+26}_{-25} \quad (-0.3\sigma)$	$\chi_{lensing}^2$	$9.7 \quad (\nu: 1.0) \quad (-0.3\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{220}$	$5712^{+76}_{-75} \quad (-0.4\sigma)$	$\chi_{lowTEB}^2$	$10496.0 \quad (\nu: 1.1) \quad (-0.2\sigma)$
$A^{kSZ}$	—	$D_{810}$	$2527^{+27}_{-27} \quad (-0.4\sigma)$	$\chi_{CamSpec}^2$	$12953.0 \quad (\nu: 19.4)$
$A_{100}^{dust}$	$0.99^{+0.37}_{-0.37}$	$D_{1420}$	$816.3^{+9.8}_{-9.7} \quad (+0.2\sigma)$	$\chi_{6DF}^2$	$0.09 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{143}^{dust}$	$1.03^{+0.36}_{-0.35}$	$n_{s,0.002}$	$0.963^{+0.016}_{-0.015} \quad (-0.1\sigma)$	$\chi_{MGS}^2$	$1.18 \quad (\nu: 0.1) \quad (+0.0\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$Y_P$	$0.2426^{+0.0054}_{-0.0054} \quad (-0.8\sigma)$	$\chi_{DR11CMass}^2$	$3.02 \quad (\nu: 0.4) \quad (-0.0\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.36}$	$Age/Gyr$	$13.98^{+0.38}_{-0.39} \quad (+0.6\sigma)$	$\chi_{DR11LOWZ}^2$	$0.95 \quad (\nu: 0.3) \quad (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0020}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.50^{+0.77}_{-0.71} \quad (-1.0\sigma)$	$\chi_{prior}^2$	$9.1 \quad (\nu: 6.3) \quad (-1.9\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0035} \quad (+0.6\sigma)$	$r_*$	$146.5^{+3.8}_{-3.8} \quad (+0.6\sigma)$	$\chi_{CMB}^2$	$23458.6 \quad (\nu: 19.3) \quad (+1609.2\sigma)$
$c_{TE}$	$1.0043^{+0.0086}_{-0.0088}$	$100\theta_*$	$1.0416^{+0.0012}_{-0.0011} \quad (+0.5\sigma)$	$\chi_{BAO}^2$	$5.2 \quad (\nu: 0.9) \quad (-0.0\sigma)$
$c_{EE}$	$0.9996^{+0.0092}_{-0.0091}$	$z_{drag}$	$1059.2^{+1.5}_{-1.5} \quad (-0.3\sigma)$		
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_{drag}$	$149.2^{+3.9}_{-3.9} \quad (+0.6\sigma)$		

$$\bar{\chi}_{eff}^2 = 23472.94; \Delta\bar{\chi}_{eff}^2 = 10487.92; R - 1 = 0.02863$$

## 14.25 base\_nnu\_mnu\_WOnlyHeymans\_BAO\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02230	$0.0223^{+0.0018}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	1.28	$1.71^{+1.0}_{-0.78}$	$z_{\text{eq}}$	3400	$3225^{+290}_{-340}$
$\Omega_c h^2$	0.195	$0.191^{+0.065}_{-0.079}$	$D_{40}$	821	$1096^{+700}_{-500}$	$k_{\text{eq}}$	0.01282	$0.0123^{+0.0023}_{-0.0027}$
$\Sigma m_\nu$ [eV]	0.13	< 2.00	$D_{220}$	3585	$4969^{+3000}_{-3000}$	$100\theta_{\text{eq}}$	0.816	$0.852^{+0.073}_{-0.058}$
$N_{\text{eff}}$	6.97	> 3.53	$D_{810}$	1509	$2032^{+1000}_{-1000}$	$100\theta_{\text{s,eq}}$	0.4511	$0.470^{+0.038}_{-0.030}$
$\ln(10^{10} A_s)$	2.69	$2.94^{+0.54}_{-0.47}$	$D_{1420}$	438	$588^{+400}_{-300}$	$r_{\text{drag}}/D_V(0.57)$	0.07177	$0.0718^{+0.0010}_{-0.0010}$
$n_s$	0.9619	$0.963^{+0.038}_{-0.039}$	$D_{2000}$	109	$148^{+100}_{-90}$	$H(0.57)$	115.8	$116^{+20}_{-20}$
$H_0$	84.4	$85^{+10}_{-20}$	$n_{\text{s},0.002}$	0.9619	$0.963^{+0.038}_{-0.039}$	$D_A(0.57)$	1113	$1122^{+300}_{-200}$
$\Omega_\Lambda$	0.6931	$0.692^{+0.018}_{-0.019}$	$Y_P$	0.2834	$0.282^{+0.017}_{-0.031}$	$F_{\text{AP}}(0.57)$	0.67485	$0.6751^{+0.0048}_{-0.0047}$
$\Omega_m$	0.3069	$0.308^{+0.019}_{-0.018}$	$Y_P^{\text{BBN}}$	0.2849	$0.283^{+0.018}_{-0.031}$	$f\sigma_8(0.57)$	0.4337	$0.429^{+0.033}_{-0.035}$
$\Omega_m h^2$	0.219	$0.222^{+0.063}_{-0.080}$	$10^5 \text{D}/\text{H}$	3.94	$4.1^{+1.3}_{-1.5}$	$\sigma_8(0.57)$	0.5569	$0.547^{+0.047}_{-0.048}$
$\Omega_\nu h^2$	0.0014	< 0.0215	Age/Gyr	11.09	$11.2^{+2.5}_{-1.7}$	$\chi^2_{6\text{DF}}$	0.007	$0.069 (\nu: 0.0)$
$\Omega_m h^3$	0.185	$0.190^{+0.079}_{-0.097}$	$z_*$	1099.3	$1099.2^{+7.8}_{-9.7}$	$\chi^2_{\text{MGS}}$	1.47	$1.52 (\nu: 0.2)$
$\sigma_8$	0.747	$0.732^{+0.061}_{-0.063}$	$r_*$	116.3	$117^{+30}_{-20}$	$\chi^2_{\text{DR11CMass}}$	2.44	$3.09 (\nu: 0.4)$
$\sigma_8 \Omega_m^{0.5}$	0.4138	$0.406^{+0.031}_{-0.033}$	$100\theta_*$	1.03885	$1.0390^{+0.0020}_{-0.0013}$	$\chi^2_{\text{DR11LOWZ}}$	0.45	$0.67 (\nu: 0.2)$
$\sigma_8 \Omega_m^{0.25}$	0.5559	$0.545^{+0.043}_{-0.044}$	$D_A/\text{Gpc}$	11.20	$11.3^{+2.5}_{-1.7}$	$\chi^2_{\text{CFHTLENS}}$	96.06	$98.1 (\nu: 2.0)$
$\sigma_8/h^{0.5}$	0.813	$0.799^{+0.11}_{-0.097}$	$z_{\text{drag}}$	1067.3	$1067.1^{+7.0}_{-8.4}$	$\chi^2_{\text{prior}}$	0.01	$2.0 (\nu: 2.0)$
$\langle d^2 \rangle^{1/2}$	2.072	$2.27^{+0.52}_{-0.43}$	$r_{\text{drag}}$	118.6	$119^{+30}_{-20}$	$\chi^2_{\text{BAO}}$	4.37	$5.3 (\nu: 0.9)$
$z_{\text{re}}$	10.99	$11.0^{+1.5}_{-1.9}$	$k_D$	0.1635	$0.163^{+0.018}_{-0.024}$			
$10^9 A_s$	1.48	$1.96^{+1.2}_{-0.89}$	$100\theta_D$	0.1716	$0.1722^{+0.0084}_{-0.011}$			

Best-fit  $\chi^2_{\text{eff}} = 100.44$ ;  $\bar{\chi}^2_{\text{eff}} = 105.46$ ;  $R - 1 = 0.00615$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMass: 2.44 DR11LOWZ: 0.45 WL - CFHTLENS\_6bin\_conservative: 96.06

## 14.26 base\_nnu\_mnu\_WLonlyHeymans\_H070p6\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02229	$0.0223^{+0.0018}_{-0.0017}$	$z_{\text{re}}$	9.40	$11.4^{+2.0}_{-2.3}$	$z_{\text{drag}}$	1060.5	$1068.4^{+8.8}_{-9.8}$
$\Omega_c h^2$	0.126	$0.218^{+0.098}_{-0.11}$	$10^9 A_s$	1.79	$1.24^{+1.3}_{-0.81}$	$r_{\text{drag}}$	143.7	$118^{+30}_{-20}$
$\Sigma m_\nu$ [eV]	0.03	$< 3.05$	$10^9 A_s e^{-2\tau}$	1.55	$1.08^{+1.2}_{-0.71}$	$k_D$	0.1428	$0.168^{+0.025}_{-0.029}$
$N_{\text{eff}}$	3.46	$> 3.65$	$D_{40}$	1030	$670^{+800}_{-500}$	$100\theta_D$	0.1623	$0.1702^{+0.0080}_{-0.0087}$
$\ln(10^{10} A_s)$	2.88	$< 3.24$	$D_{220}$	4728	$2991^{+4000}_{-2000}$	$z_{\text{eq}}$	3345	$3802^{+600}_{-800}$
$n_s$	0.9614	$0.963^{+0.039}_{-0.040}$	$D_{810}$	2064	$1308^{+2000}_{-1000}$	$k_{\text{eq}}$	0.01049	$0.0143^{+0.0040}_{-0.0047}$
$H_0$	70.5	$70.8^{+6.3}_{-6.3}$	$D_{1420}$	654	$393^{+500}_{-300}$	$100\theta_{\text{eq}}$	0.824	$0.759^{+0.13}_{-0.089}$
$\Omega_\Lambda$	0.702	$0.49^{+0.25}_{-0.25}$	$D_{2000}$	181	$102^{+200}_{-90}$	$100\theta_{s,\text{eq}}$	0.455	$0.421^{+0.067}_{-0.047}$
$\Omega_m$	0.298	$0.51^{+0.25}_{-0.25}$	$n_{s,0.002}$	0.9614	$0.963^{+0.039}_{-0.040}$	$r_{\text{drag}}/D_V(0.57)$	0.0723	$0.0648^{+0.0085}_{-0.0067}$
$\Omega_m h^2$	0.148	$0.25^{+0.11}_{-0.12}$	$Y_P$	0.2509	$0.279^{+0.018}_{-0.027}$	$H(0.57)$	96.0	$111^{+20}_{-20}$
$\Omega_\nu h^2$	0.0003	$< 0.0328$	$Y_P^{\text{BBN}}$	0.2522	$0.280^{+0.018}_{-0.027}$	$D_A(0.57)$	1338	$1243^{+130}_{-120}$
$\Omega_m h^3$	0.104	$0.180^{+0.083}_{-0.085}$	$10^5 \text{D}/\text{H}$	2.75	$3.9^{+1.2}_{-1.3}$	$F_{\text{AP}}(0.57)$	0.673	$0.718^{+0.048}_{-0.053}$
$\sigma_8$	0.761	$0.58^{+0.20}_{-0.16}$	Age/Gyr	13.39	$11.6^{+2.0}_{-1.6}$	$f\sigma_8(0.57)$	0.439	$0.356^{+0.094}_{-0.080}$
$\sigma_8 \Omega_m^{0.5}$	0.4157	$0.400^{+0.030}_{-0.031}$	$z_*$	1090.9	$1101^{+10}_{-11}$	$\sigma_8(0.57)$	0.569	$0.41^{+0.17}_{-0.14}$
$\sigma_8 \Omega_m^{0.25}$	0.563	$0.479^{+0.089}_{-0.077}$	$r_*$	141.1	$115^{+30}_{-20}$	$\chi^2_{\text{H070p6}}$	0.00	$0.97 (\nu: 0.9)$
$\sigma_8/h^{0.5}$	0.907	$0.69^{+0.22}_{-0.18}$	$100\theta_*$	1.04070	$1.0393^{+0.0015}_{-0.0011}$	$\chi^2_{\text{CFHTLENS}}$	96.65	$98.2 (\nu: 2.3)$
$\langle d^2 \rangle^{1/2}$	2.25	$1.92^{+0.66}_{-0.42}$	$D_A/\text{Gpc}$	13.56	$11.1^{+2.6}_{-2.1}$	$\chi^2_{\text{prior}}$	0.00	$2.0 (\nu: 2.0)$

Best-fit  $\chi^2_{\text{eff}} = 96.66$ ;  $\bar{\chi}^2_{\text{eff}} = 101.19$ ;  $R - 1 = 0.00788$

$\chi^2_{\text{eff}}$ : Hubble - H070p6: 0.00 WL - CFHTLENS\_6bin\_conservative: 96.65

## 14.27 base\_nnu\_mnu\_WOnlyHeymans\_H070p6\_BAO\_theta

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02212	$0.0222^{+0.0018}_{-0.0018}$	$10^9 A_s e^{-2\tau}$	1.52	$1.93^{+1.1}_{-0.84}$	$z_{\text{eq}}$	3349	$3199^{+280}_{-320}$
$\Omega_c h^2$	0.1322	$0.132^{+0.030}_{-0.030}$	$D_{40}$	1002	$1271^{+700}_{-600}$	$k_{\text{eq}}$	0.01073	$0.0105^{+0.0012}_{-0.0012}$
$\Sigma m_\nu$ [eV]	0.12	$< 1.35$	$D_{220}$	4564	$5964^{+4000}_{-3000}$	$100\theta_{\text{eq}}$	0.823	$0.855^{+0.070}_{-0.056}$
$N_{\text{eff}}$	3.80	$4.2^{+1.6}_{-1.5}$	$D_{810}$	1991	$2517^{+1000}_{-1000}$	$100\theta_{\text{s,eq}}$	0.4545	$0.471^{+0.037}_{-0.030}$
$\ln(10^{10} A_s)$	2.862	$3.07^{+0.52}_{-0.45}$	$D_{1420}$	624	$778^{+500}_{-400}$	$r_{\text{drag}}/D_V(0.57)$	0.07177	$0.0717^{+0.0010}_{-0.0011}$
$n_s$	0.9612	$0.963^{+0.040}_{-0.039}$	$D_{2000}$	170	$211^{+100}_{-100}$	$H(0.57)$	97.5	$98.7^{+8.8}_{-8.8}$
$H_0$	71.0	$71.8^{+6.3}_{-6.4}$	$n_{\text{s},0.002}$	0.9612	$0.963^{+0.040}_{-0.039}$	$D_A(0.57)$	1322	$1309^{+120}_{-120}$
$\Omega_\Lambda$	0.6914	$0.690^{+0.018}_{-0.020}$	$Y_P$	0.2550	$0.259^{+0.017}_{-0.018}$	$F_{\text{AP}}(0.57)$	0.67529	$0.6756^{+0.0049}_{-0.0047}$
$\Omega_m$	0.3086	$0.310^{+0.020}_{-0.018}$	$Y_P^{\text{BBN}}$	0.2563	$0.260^{+0.018}_{-0.018}$	$f\sigma_8(0.57)$	0.4337	$0.428^{+0.033}_{-0.036}$
$\Omega_m h^2$	0.1556	$0.160^{+0.031}_{-0.029}$	$10^5 \text{D/H}$	2.90	$3.03^{+0.76}_{-0.74}$	$\sigma_8(0.57)$	0.5556	$0.545^{+0.048}_{-0.050}$
$\Omega_\nu h^2$	0.0013	$< 0.0145$	Age/Gyr	13.17	$13.0^{+1.2}_{-1.2}$	$\chi^2_{\text{H070p6}}$	0.02	1.1 ( $\nu$ : 1.3)
$\Omega_m h^3$	0.1105	$0.116^{+0.032}_{-0.032}$	$z_*$	1092.04	$1092.4^{+5.1}_{-4.7}$	$\chi^2_{6\text{DF}}$	0.010	0.08 ( $\nu$ : 0.0)
$\sigma_8$	0.745	$0.729^{+0.062}_{-0.065}$	$r_*$	138.1	$137^{+13}_{-13}$	$\chi^2_{\text{MGS}}$	1.41	1.44 ( $\nu$ : 0.2)
$\sigma_8 \Omega_m^{0.5}$	0.4141	$0.406^{+0.032}_{-0.034}$	$100\theta_*$	1.04056	$1.04048^{+0.00090}_{-0.00087}$	$\chi^2_{\text{DR11CMass}}$	2.39	3.1 ( $\nu$ : 0.5)
$\sigma_8 \Omega_m^{0.25}$	0.5556	$0.544^{+0.043}_{-0.046}$	$D_A/\text{Gpc}$	13.28	$13.1^{+1.3}_{-1.2}$	$\chi^2_{\text{DR11LOWZ}}$	0.48	0.76 ( $\nu$ : 0.3)
$\sigma_8/h^{0.5}$	0.885	$0.861^{+0.086}_{-0.084}$	$z_{\text{drag}}$	1060.81	$1061.3^{+4.6}_{-4.8}$	$\chi^2_{\text{CFHTLENS}}$	96.74	98.7 ( $\nu$ : 2.2)
$\langle d^2 \rangle^{1/2}$	2.222	$2.39^{+0.51}_{-0.43}$	$r_{\text{drag}}$	140.8	$139^{+14}_{-12}$	$\chi^2_{\text{prior}}$	0.05	2.0 ( $\nu$ : 2.1)
$z_{\text{re}}$	9.63	$9.73^{+1.0}_{-0.95}$	$k_D$	0.1447	$0.1456^{+0.0097}_{-0.0096}$	$\chi^2_{\text{BAO}}$	4.29	5.4 ( $\nu$ : 1.2)
$10^9 A_s$	1.75	$2.22^{+1.3}_{-0.96}$	$100\theta_D$	0.1635	$0.1646^{+0.0057}_{-0.0056}$			

Best-fit  $\chi^2_{\text{eff}} = 101.10$ ;  $\bar{\chi}^2_{\text{eff}} = 107.23$ ;  $R - 1 = 0.00319$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.40 DR11LOWZ: 0.48 Hubble - H070p6: 0.02 WL - CFHTLENS\_6bin\_conservative: 96.74

# 15 nnu+r

## 15.1 base\_nnu\_r\_plikHM\_TT\_lowTEB\_nnup39

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022591	$0.02260^{+0.00046}_{-0.00046}$	$\Omega_m h^3$	0.10377	$0.10376^{+0.00097}_{-0.00097}$	$100\theta_D$	0.16172	$0.16174^{+0.00054}_{-0.00051}$
$\Omega_c h^2$	0.12382	$0.1236^{+0.0045}_{-0.0044}$	$\sigma_8$	0.8507	$0.849^{+0.031}_{-0.030}$	$z_{\text{eq}}$	3325	$3319^{+98}_{-95}$
$100\theta_{\text{MC}}$	1.04049	$1.04054^{+0.00093}_{-0.00096}$	$\sigma_8 \Omega_m^{0.5}$	0.4623	$0.460^{+0.025}_{-0.025}$	$k_{\text{eq}}$	0.010410	$0.01039^{+0.00031}_{-0.00030}$
$\tau$	0.0904	$0.089^{+0.039}_{-0.039}$	$\sigma_8 \Omega_m^{0.25}$	0.6271	$0.625^{+0.026}_{-0.026}$	$100\theta_{\text{eq}}$	0.8280	$0.829^{+0.019}_{-0.019}$
$\ln(10^{10} A_s)$	3.125	$3.122^{+0.075}_{-0.075}$	$\sigma_8/h^{0.5}$	1.0127	$1.010^{+0.039}_{-0.039}$	$100\theta_{s,\text{eq}}$	0.4569	$0.4575^{+0.0098}_{-0.0097}$
$n_s$	0.9838	$0.984^{+0.013}_{-0.013}$	$\langle d^2 \rangle^{1/2}$	2.477	$2.470^{+0.090}_{-0.091}$	$r_{\text{drag}}/D_V(0.57)$	0.07243	$0.0725^{+0.0015}_{-0.0015}$
$r$	0.000	$< 0.130$	$z_{\text{re}}$	11.13	$10.9^{+3.2}_{-3.6}$	$H(0.57)$	95.93	$95.98^{+0.93}_{-0.89}$
$y_{\text{cal}}$	1.0004	$1.0005^{+0.0050}_{-0.0049}$	$10^9 A_s$	2.277	$2.27^{+0.18}_{-0.16}$	$D_A(0.57)$	1337.4	$1336^{+25}_{-25}$
$A_{217}^{\text{CIB}}$	68.6	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.9001	$1.899^{+0.028}_{-0.027}$	$F_{\text{AP}}(0.57)$	0.6719	$0.6716^{+0.0067}_{-0.0063}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1214.8	$1231^{+38}_{-37}$	$f\sigma_8(0.57)$	0.4901	$0.488^{+0.019}_{-0.019}$
$A_{143}^{\text{tSZ}}$	7.04	$4.8^{+3.8}_{-3.8}$	$D_{220}$	5718	$5719^{+81}_{-80}$	$\sigma_8(0.57)$	0.6370	$0.636^{+0.024}_{-0.023}$
$A_{100}^{\text{PS}}$	259	$264^{+60}_{-50}$	$D_{810}$	2538.9	$2539^{+27}_{-27}$	$r_{0.002}$	0.000	$< 0.131$
$A_{143}^{\text{PS}}$	42.5	$47^{+20}_{-20}$	$D_{1420}$	813.7	$813.7^{+9.9}_{-9.9}$	$r_{0.01}$	0.000	$< 0.130$
$A_{143 \times 217}^{\text{PS}}$	34.8	$40^{+20}_{-20}$	$D_{2000}$	228.92	$228.9^{+3.6}_{-3.7}$	$\ln(10^{10} A_t)$	-5.14	$-0.4^{+2.0}_{-2.4}$
$A_{217}^{\text{PS}}$	97.8	$97^{+20}_{-20}$	$n_{s,0.002}$	0.9838	$0.984^{+0.013}_{-0.013}$	$r_{10}$	0.0001	$< 0.0658$
$A^{\text{kSZ}}$	0.1	—	$Y_{\text{P}}$	0.250642	$0.25064^{+0.00020}_{-0.00021}$	$10^9 A_t$	0.001	$< 0.292$
$A_{100}^{\text{dustTT}}$	7.47	$7.5^{+3.7}_{-3.7}$	$Y_{\text{P}}^{\text{BBN}}$	0.251987	$0.25199^{+0.00020}_{-0.00021}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.246$
$A_{143}^{\text{dustTT}}$	9.16	$9.1^{+3.6}_{-3.6}$	$10^5 \text{D}/\text{H}$	2.683	$2.683^{+0.091}_{-0.086}$	$f_{2000}^{143}$	31.5	$32^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	18.0	$17.3^{+8.2}_{-8.1}$	$\text{Age}/\text{Gyr}$	13.413	$13.409^{+0.077}_{-0.076}$	$f_{2000}^{143 \times 217}$	33.92	$34^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$z_*$	1090.35	$1090.33^{+0.87}_{-0.84}$	$f_{2000}^{217}$	107.34	$107.5^{+4.1}_{-4.0}$
$c_{100}$	0.99790	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	141.42	$141.48^{+0.95}_{-0.95}$	$\chi_{\text{lowTEB}}^2$	10495.1	$10497.5 (\nu: 4.7)$
$c_{217}$	0.99613	$0.9961^{+0.0029}_{-0.0028}$	$100\theta_*$	1.04041	$1.04046^{+0.00092}_{-0.00094}$	$\chi_{\text{plik}}^2$	766.2	$779.7 (\nu: 17.2)$
$H_0$	70.56	$70.7^{+2.0}_{-2.0}$	$D_A/\text{Gpc}$	13.593	$13.598^{+0.087}_{-0.087}$	$\chi_{\text{prior}}^2$	2.1	$7.5 (\nu: 6.4)$
$\Omega_\Lambda$	0.7047	$0.706^{+0.024}_{-0.026}$	$z_{\text{drag}}$	1061.04	$1061.02^{+0.90}_{-0.93}$	$\chi_{\text{CMB}}^2$	11261.3	$11277.2 (\nu: 16.3)$
$\Omega_m$	0.2953	$0.294^{+0.026}_{-0.024}$	$r_{\text{drag}}$	143.97	$144.03^{+0.94}_{-0.94}$			
$\Omega_m h^2$	0.14706	$0.1468^{+0.0043}_{-0.0042}$	$k_D$	0.14291	$0.1429^{+0.0010}_{-0.0010}$			

Best-fit  $\chi_{\text{eff}}^2 = 11263.45$ ;  $\bar{\chi}_{\text{eff}}^2 = 11284.71$ ;  $R - 1 = 0.00534$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.13 plik\_dx11dr2\_HM\_v18\_TT: 766.20

## 15.2 base\_nnu\_r\_plikHM\_TTTEEE\_lowTEB\_nnup39

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022618	$0.02260^{+0.00032}_{-0.00030}$	$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.569	$13.572^{+0.057}_{-0.058}$
$\Omega_c h^2$	0.12489	$0.1248^{+0.0030}_{-0.0030}$	$A_{217}^{\text{dustTE}}$	1.66	$1.67^{+0.50}_{-0.50}$	$z_{\text{drag}}$	1061.15	$1061.12^{+0.62}_{-0.61}$
$100\theta_{\text{MC}}$	1.04025	$1.04026^{+0.00062}_{-0.00064}$	$c_{100}$	0.99814	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	143.68	$143.72^{+0.61}_{-0.61}$
$\tau$	0.0935	$0.089^{+0.033}_{-0.034}$	$c_{217}$	0.99616	$0.9961^{+0.0028}_{-0.0028}$	$k_D$	0.14326	$0.14320^{+0.00066}_{-0.00066}$
$\ln(10^{10} A_s)$	3.134	$3.126^{+0.064}_{-0.065}$	$H_0$	70.13	$70.2^{+1.4}_{-1.3}$	$100\theta_D$	0.161618	$0.16164^{+0.00036}_{-0.00036}$
$n_s$	0.9810	$0.9812^{+0.0097}_{-0.0097}$	$\Omega_\Lambda$	0.6988	$0.699^{+0.017}_{-0.017}$	$z_{\text{eq}}$	3350	$3347^{+64}_{-64}$
$r$	0.000	$< 0.123$	$\Omega_m$	0.3012	$0.301^{+0.017}_{-0.017}$	$k_{\text{eq}}$	0.010488	$0.01048^{+0.00020}_{-0.00020}$
$y_{\text{cal}}$	1.0003	$1.0005^{+0.0049}_{-0.0051}$	$\Omega_m h^2$	0.14816	$0.1480^{+0.0028}_{-0.0028}$	$100\theta_{\text{eq}}$	0.8233	$0.824^{+0.013}_{-0.012}$
$A_{217}^{\text{CIB}}$	68.7	$65^{+10}_{-10}$	$\Omega_m h^3$	0.10390	$0.10385^{+0.00063}_{-0.00061}$	$100\theta_{s,\text{eq}}$	0.4544	$0.4546^{+0.0064}_{-0.0063}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\sigma_8$	0.8570	$0.853^{+0.027}_{-0.027}$	$r_{\text{drag}}/D_V(0.57)$	0.07205	$0.0721^{+0.0010}_{-0.00099}$
$A_{143}^{\text{tSZ}}$	7.19	$5.1^{+3.7}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	0.4704	$0.468^{+0.020}_{-0.019}$	$H(0.57)$	95.77	$95.78^{+0.61}_{-0.58}$
$A_{100}^{\text{PS}}$	261	$266^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6349	$0.632^{+0.022}_{-0.021}$	$D_A(0.57)$	1342.6	$1342^{+17}_{-17}$
$A_{143}^{\text{PS}}$	41.5	$46^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0234	$1.019^{+0.033}_{-0.033}$	$F_{\text{AP}}(0.57)$	0.67341	$0.6733^{+0.0045}_{-0.0044}$
$A_{143 \times 217}^{\text{PS}}$	34	$41^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.505	$2.493^{+0.079}_{-0.078}$	$f\sigma_8(0.57)$	0.4954	$0.493^{+0.016}_{-0.016}$
$A_{217}^{\text{PS}}$	97.5	$97^{+20}_{-20}$	$z_{\text{re}}$	11.42	$11.0^{+2.7}_{-3.1}$	$\sigma_8(0.57)$	0.6402	$0.637^{+0.021}_{-0.021}$
$A^{\text{kSZ}}$	0.0	—	$10^9 A_s$	2.298	$2.28^{+0.15}_{-0.15}$	$r_{0.002}$	0.000	$< 0.122$
$A_{100}^{\text{dustTT}}$	7.60	$7.6^{+3.7}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.9055	$1.905^{+0.025}_{-0.025}$	$r_{0.01}$	0.000	$< 0.122$
$A_{143}^{\text{dustTT}}$	9.07	$9.1^{+3.6}_{-3.6}$	$D_{40}$	1223.9	$1239^{+37}_{-35}$	$\ln(10^{10} A_t)$	-6.46	$-0.4^{+1.9}_{-2.4}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.1}_{-8.1}$	$D_{220}$	5726	$5724^{+77}_{-77}$	$r_{10}$	0.0000	$< 0.0613$
$A_{217}^{\text{dustTT}}$	81.7	$82^{+10}_{-10}$	$D_{810}$	2540.1	$2540^{+27}_{-28}$	$10^9 A_t$	0.000	$< 0.279$
$A_{100}^{\text{dustEE}}$	0.0819	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	813.4	$813.5^{+9.4}_{-9.7}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.234$
$A_{100 \times 143}^{\text{dustEE}}$	0.0498	$0.0490^{+0.010}_{-0.0097}$	$D_{2000}$	229.02	$228.9^{+3.2}_{-3.2}$	$f_{2000}^{143}$	31.1	$31^{+5}_{-5}$
$A_{100 \times 217}^{\text{dustEE}}$	0.098	$0.099^{+0.064}_{-0.063}$	$n_{s,0.002}$	0.9810	$0.9812^{+0.0097}_{-0.0097}$	$f_{2000}^{143 \times 217}$	33.65	$34^{+4}_{-4}$
$A_{143}^{\text{dustEE}}$	0.1013	$0.100^{+0.014}_{-0.014}$	$Y_P$	0.250654	$0.25065^{+0.00014}_{-0.00013}$	$f_{2000}^{217}$	107.09	$107.2^{+3.7}_{-3.7}$
$A_{143 \times 217}^{\text{dustEE}}$	0.221	$0.221^{+0.091}_{-0.092}$	$Y_P^{\text{BBN}}$	0.252000	$0.25199^{+0.00014}_{-0.00013}$	$\chi_{\text{lowTEB}}^2$	10496.3	$10498.1 (\nu: 4.4)$
$A_{217}^{\text{dustEE}}$	0.639	$0.64^{+0.26}_{-0.26}$	$10^5 D/H$	2.678	$2.681^{+0.059}_{-0.060}$	$\chi_{\text{plik}}^2$	2436.9	$2456.1 (\nu: 24.1)$
$A_{100}^{\text{dustTE}}$	0.140	$0.142^{+0.074}_{-0.074}$	$\text{Age/Gyr}$	13.421	$13.422^{+0.049}_{-0.050}$	$\chi_{\text{prior}}^2$	7.5	$19.7 (\nu: 15.6)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.132^{+0.057}_{-0.057}$	$z_*$	1090.41	$1090.42^{+0.59}_{-0.58}$	$\chi_{\text{CMB}}^2$	12933.2	$12954.3 (\nu: 23.7)$
$A_{100 \times 217}^{\text{dustTE}}$	0.304	$0.30^{+0.17}_{-0.16}$	$r_*$	141.14	$141.18^{+0.62}_{-0.62}$			
$A_{143}^{\text{dustTE}}$	0.155	$0.16^{+0.11}_{-0.10}$	$100\theta_*$	1.04017	$1.04017^{+0.00061}_{-0.00063}$			

Best-fit  $\chi_{\text{eff}}^2 = 12940.62$ ;  $\bar{\chi}_{\text{eff}}^2 = 12973.98$ ;  $R - 1 = 0.01087$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.26 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2436.89



### 15.3 base\_nnu\_r\_plikHM\_TT\_lowTEB\_nnup57

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022748	$0.02275^{+0.00047}_{-0.00045}$	$\Omega_m h^3$	0.10744	$0.10740^{+0.00099}_{-0.00099}$	$100\theta_D$	0.16209	$0.16210^{+0.00052}_{-0.00052}$
$\Omega_c h^2$	0.12568	$0.1254^{+0.0046}_{-0.0046}$	$\sigma_8$	0.8603	$0.857^{+0.031}_{-0.031}$	$z_{\text{eq}}$	3295	$3288^{+97}_{-97}$
$100\theta_{\text{MC}}$	1.04039	$1.04041^{+0.00093}_{-0.00094}$	$\sigma_8 \Omega_m^{0.5}$	0.4609	$0.458^{+0.026}_{-0.026}$	$k_{\text{eq}}$	0.010434	$0.01041^{+0.00031}_{-0.00031}$
$\tau$	0.0965	$0.094^{+0.039}_{-0.039}$	$\sigma_8 \Omega_m^{0.25}$	0.6297	$0.626^{+0.027}_{-0.027}$	$100\theta_{\text{eq}}$	0.8341	$0.836^{+0.020}_{-0.019}$
$\ln(10^{10} A_s)$	3.142	$3.135^{+0.075}_{-0.074}$	$\sigma_8/h^{0.5}$	1.0134	$1.008^{+0.039}_{-0.040}$	$100\theta_{s,\text{eq}}$	0.4599	$0.461^{+0.010}_{-0.0098}$
$n_s$	0.9910	$0.992^{+0.013}_{-0.013}$	$\langle d^2 \rangle^{1/2}$	2.470	$2.456^{+0.092}_{-0.092}$	$r_{\text{drag}}/D_V(0.57)$	0.07291	$0.0730^{+0.0016}_{-0.0015}$
$r$	0.000	$< 0.142$	$z_{\text{re}}$	11.67	$11.3^{+3.1}_{-3.5}$	$H(0.57)$	97.34	$97.4^{+1.0}_{-0.93}$
$y_{\text{cal}}$	1.00028	$1.0005^{+0.0049}_{-0.0049}$	$10^9 A_s$	2.314	$2.30^{+0.18}_{-0.17}$	$D_A(0.57)$	1313.7	$1312^{+25}_{-25}$
$A_{217}^{\text{CIB}}$	68.8	$66^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.9080	$1.907^{+0.028}_{-0.028}$	$F_{\text{AP}}(0.57)$	0.6697	$0.6693^{+0.0066}_{-0.0064}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1207.6	$1224^{+41}_{-39}$	$f\sigma_8(0.57)$	0.4931	$0.490^{+0.020}_{-0.020}$
$A_{143}^{\text{tSZ}}$	6.02	$4.6^{+3.9}_{-4.0}$	$D_{220}$	5721	$5720^{+83}_{-80}$	$\sigma_8(0.57)$	0.6465	$0.644^{+0.024}_{-0.023}$
$A_{100}^{\text{PS}}$	267	$268^{+50}_{-60}$	$D_{810}$	2539.8	$2540^{+27}_{-27}$	$r_{0.002}$	0.000	$< 0.148$
$A_{143}^{\text{PS}}$	43.9	$48^{+20}_{-20}$	$D_{1420}$	812.5	$813.0^{+9.9}_{-10}$	$r_{0.01}$	0.000	$< 0.145$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$D_{2000}$	228.00	$228.1^{+3.6}_{-3.7}$	$\ln(10^{10} A_t)$	-5.74	$-0.2^{+1.9}_{-2.5}$
$A_{217}^{\text{PS}}$	95.9	$97^{+20}_{-20}$	$n_{s,0.002}$	0.9910	$0.992^{+0.013}_{-0.013}$	$r_{10}$	0.0001	$< 0.0740$
$A^{\text{kSZ}}$	1.9	—	$Y_{\text{P}}$	0.252986	$0.25299^{+0.00021}_{-0.00020}$	$10^9 A_t$	0.000	$< 0.324$
$A_{100}^{\text{dustTT}}$	7.52	$7.5^{+3.7}_{-3.7}$	$Y_{\text{P}}^{\text{BBN}}$	0.254340	$0.25434^{+0.00021}_{-0.00020}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.271$
$A_{143}^{\text{dustTT}}$	9.15	$9.1^{+3.6}_{-3.6}$	$10^5 \text{D}/\text{H}$	2.714	$2.714^{+0.089}_{-0.088}$	$f_{2000}^{143}$	32.9	$33^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.3	$17.3^{+8.2}_{-8.2}$	$\text{Age}/\text{Gyr}$	13.237	$13.234^{+0.076}_{-0.078}$	$f_{2000}^{143 \times 217}$	34.84	$35^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	81.3	$82^{+10}_{-10}$	$z_*$	1090.48	$1090.45^{+0.87}_{-0.87}$	$f_{2000}^{217}$	108.18	$108.2^{+4.0}_{-4.0}$
$c_{100}$	0.99790	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	140.03	$140.10^{+0.95}_{-0.94}$	$\chi_{\text{lowTEB}}^2$	10495.1	$10497.2 (\nu: 5.2)$
$c_{217}$	0.99610	$0.9962^{+0.0028}_{-0.0028}$	$100\theta_*$	1.04018	$1.04020^{+0.00092}_{-0.00092}$	$\chi_{\text{plik}}^2$	767.7	$781.4 (\nu: 18.2)$
$H_0$	72.07	$72.2^{+2.1}_{-2.1}$	$D_A/\text{Gpc}$	13.462	$13.469^{+0.088}_{-0.086}$	$\chi_{\text{prior}}^2$	2.3	$7.5 (\nu: 6.6)$
$\Omega_\Lambda$	0.7130	$0.714^{+0.024}_{-0.025}$	$z_{\text{drag}}$	1061.65	$1061.64^{+0.94}_{-0.90}$	$\chi_{\text{CMB}}^2$	11262.8	$11278.6 (\nu: 16.9)$
$\Omega_m$	0.2870	$0.286^{+0.025}_{-0.024}$	$r_{\text{drag}}$	142.51	$142.59^{+0.94}_{-0.93}$			
$\Omega_m h^2$	0.14908	$0.1488^{+0.0044}_{-0.0044}$	$k_D$	0.14398	$0.1439^{+0.0010}_{-0.0011}$			

Best-fit  $\chi_{\text{eff}}^2 = 11265.06$ ;  $\bar{\chi}_{\text{eff}}^2 = 11286.10$ ;  $R - 1 = 0.01002$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.06 plik\_dx11dr2\_HM\_v18\_TT: 767.74

## 15.4 base\_nnu\_r\_plikHM\_TTTEEE\_lowTEB\_nnup57

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022779	$0.02276^{+0.00031}_{-0.00031}$	$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.430	$13.432^{+0.057}_{-0.057}$
$\Omega_c h^2$	0.12718	$0.1272^{+0.0031}_{-0.0030}$	$A_{217}^{\text{dustTE}}$	1.66	$1.66^{+0.50}_{-0.51}$	$z_{\text{drag}}$	1061.84	$1061.78^{+0.61}_{-0.57}$
$100\theta_{\text{MC}}$	1.04005	$1.04004^{+0.00062}_{-0.00063}$	$c_{100}$	0.99812	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	142.11	$142.14^{+0.60}_{-0.60}$
$\tau$	0.0983	$0.094^{+0.034}_{-0.035}$	$c_{217}$	0.99617	$0.9962^{+0.0028}_{-0.0029}$	$k_D$	0.14444	$0.14440^{+0.00068}_{-0.00065}$
$\ln(10^{10} A_s)$	3.149	$3.141^{+0.065}_{-0.067}$	$H_0$	71.45	$71.4^{+1.4}_{-1.4}$	$100\theta_D$	0.161946	$0.16198^{+0.00036}_{-0.00034}$
$n_s$	0.9881	$0.9884^{+0.0096}_{-0.0097}$	$\Omega_\Lambda$	0.7050	$0.705^{+0.016}_{-0.017}$	$z_{\text{eq}}$	3329	$3328^{+65}_{-64}$
$r$	0.000	$< 0.133$	$\Omega_m$	0.2950	$0.295^{+0.017}_{-0.016}$	$k_{\text{eq}}$	0.010542	$0.01054^{+0.00021}_{-0.00020}$
$y_{\text{cal}}$	1.00025	$1.0006^{+0.0050}_{-0.0049}$	$\Omega_m h^2$	0.15061	$0.1506^{+0.0029}_{-0.0029}$	$100\theta_{\text{eq}}$	0.8275	$0.828^{+0.013}_{-0.013}$
$A_{217}^{\text{CIB}}$	69.1	$66^{+10}_{-10}$	$\Omega_m h^3$	0.10761	$0.10757^{+0.00064}_{-0.00063}$	$100\theta_{s,\text{eq}}$	0.4565	$0.4565^{+0.0064}_{-0.0065}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\sigma_8$	0.8671	$0.864^{+0.027}_{-0.027}$	$r_{\text{drag}}/D_V(0.57)$	0.07238	$0.0724^{+0.0010}_{-0.0010}$
$A_{143}^{\text{tSZ}}$	7.05	$5.0^{+3.8}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	0.4709	$0.469^{+0.020}_{-0.019}$	$H(0.57)$	97.11	$97.10^{+0.63}_{-0.61}$
$A_{100}^{\text{PS}}$	264	$268^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6390	$0.637^{+0.022}_{-0.022}$	$D_A(0.57)$	1321.0	$1321^{+17}_{-17}$
$A_{143}^{\text{PS}}$	42.8	$47^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0258	$1.022^{+0.033}_{-0.033}$	$F_{\text{AP}}(0.57)$	0.67179	$0.6718^{+0.0045}_{-0.0043}$
$A_{143 \times 217}^{\text{PS}}$	35	$41^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.499	$2.490^{+0.078}_{-0.078}$	$f\sigma_8(0.57)$	0.4994	$0.498^{+0.016}_{-0.016}$
$A_{217}^{\text{PS}}$	97.3	$97^{+20}_{-20}$	$z_{\text{re}}$	11.86	$11.5^{+2.7}_{-3.1}$	$\sigma_8(0.57)$	0.6494	$0.647^{+0.021}_{-0.021}$
$A^{\text{kSZ}}$	0.5	—	$10^9 A_s$	2.331	$2.31^{+0.16}_{-0.15}$	$r_{0.002}$	0.000	$< 0.136$
$A_{100}^{\text{dustTT}}$	7.56	$7.6^{+3.6}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.9145	$1.915^{+0.025}_{-0.024}$	$r_{0.01}$	0.000	$< 0.134$
$A_{143}^{\text{dustTT}}$	9.15	$9.1^{+3.6}_{-3.6}$	$D_{40}$	1215.9	$1233^{+36}_{-34}$	$\ln(10^{10} A_t)$	-5.85	$-0.3^{+1.9}_{-2.4}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.4^{+8.3}_{-8.2}$	$D_{220}$	5725	$5723^{+77}_{-76}$	$r_{10}$	0.0001	$< 0.0684$
$A_{217}^{\text{dustTT}}$	81.8	$82^{+10}_{-10}$	$D_{810}$	2541.2	$2543^{+27}_{-27}$	$10^9 A_t$	0.000	$< 0.306$
$A_{100}^{\text{dustEE}}$	0.0826	$0.082^{+0.011}_{-0.011}$	$D_{1420}$	812.5	$813.0^{+9.6}_{-9.4}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.254$
$A_{100 \times 143}^{\text{dustEE}}$	0.0502	$0.0493^{+0.0099}_{-0.0098}$	$D_{2000}$	228.23	$228.3^{+3.3}_{-3.2}$	$f_{2000}^{143}$	32.0	$32^{+5}_{-5}$
$A_{100 \times 217}^{\text{dustEE}}$	0.098	$0.099^{+0.064}_{-0.064}$	$n_{s,0.002}$	0.9881	$0.9884^{+0.0096}_{-0.0097}$	$f_{2000}^{143 \times 217}$	34.46	$34.4^{+3.8}_{-3.7}$
$A_{143}^{\text{dustEE}}$	0.1016	$0.101^{+0.014}_{-0.014}$	$Y_P$	0.253000	$0.25299^{+0.00014}_{-0.00014}$	$f_{2000}^{217}$	107.76	$107.8^{+3.7}_{-3.6}$
$A_{143 \times 217}^{\text{dustEE}}$	0.219	$0.219^{+0.092}_{-0.090}$	$Y_P^{\text{BBN}}$	0.254354	$0.25434^{+0.00014}_{-0.00014}$	$\chi_{\text{lowTEB}}^2$	10496.0	$10497.9 (\nu: 4.7)$
$A_{217}^{\text{dustEE}}$	0.643	$0.64^{+0.25}_{-0.26}$	$10^5 \text{D}/\text{H}$	2.708	$2.712^{+0.061}_{-0.058}$	$\chi_{\text{plik}}^2$	2441.2	$2460.4 (\nu: 25.1)$
$A_{100}^{\text{dustTE}}$	0.141	$0.142^{+0.075}_{-0.074}$	$\text{Age}/\text{Gyr}$	13.250	$13.252^{+0.050}_{-0.051}$	$\chi_{\text{prior}}^2$	7.9	$20 (\nu: 16.0)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.132^{+0.057}_{-0.057}$	$z_*$	1090.57	$1090.60^{+0.60}_{-0.58}$	$\chi_{\text{CMB}}^2$	12937.2	$12958.3 (\nu: 24.1)$
$A_{100 \times 217}^{\text{dustTE}}$	0.302	$0.30^{+0.16}_{-0.16}$	$r_*$	139.65	$139.67^{+0.61}_{-0.62}$			
$A_{143}^{\text{dustTE}}$	0.152	$0.16^{+0.11}_{-0.10}$	$100\theta_*$	1.03983	$1.03983^{+0.00061}_{-0.00062}$			

Best-fit  $\chi_{\text{eff}}^2 = 12945.12$ ;  $\bar{\chi}_{\text{eff}}^2 = 12978.32$ ;  $R - 1 = 0.01145$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.97 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2441.22

## 15.5 base\_nnu\_r\_plikHM\_TT\_lowTEB\_nnup39\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022623	$0.02262^{+0.00045}_{-0.00045}$	$\Omega_m h^3$	0.10371	$0.10364^{+0.00093}_{-0.00093}$	$100\theta_D$	0.16174	$0.16176^{+0.00052}_{-0.00050}$
$\Omega_c h^2$	0.12273	$0.1225^{+0.0042}_{-0.0042}$	$\sigma_8$	0.8364	$0.836^{+0.020}_{-0.019}$	$z_{eq}$	3301	$3294^{+89}_{-89}$
$100\theta_{MC}$	1.04065	$1.04065^{+0.00090}_{-0.00089}$	$\sigma_8 \Omega_m^{0.5}$	0.4499	$0.449^{+0.018}_{-0.017}$	$k_{eq}$	0.010334	$0.01031^{+0.00028}_{-0.00028}$
$\tau$	0.0791	$0.079^{+0.033}_{-0.032}$	$\sigma_8 \Omega_m^{0.25}$	0.6134	$0.612^{+0.016}_{-0.016}$	$100\theta_{eq}$	0.8327	$0.834^{+0.018}_{-0.017}$
$\ln(10^{10} A_s)$	3.099	$3.099^{+0.060}_{-0.057}$	$\sigma_8/h^{0.5}$	0.9924	$0.991^{+0.022}_{-0.023}$	$100\theta_{s,eq}$	0.4593	$0.4600^{+0.0093}_{-0.0089}$
$n_s$	0.9850	$0.986^{+0.013}_{-0.012}$	$\langle d^2 \rangle^{1/2}$	2.431	$2.427^{+0.053}_{-0.052}$	$r_{drag}/D_V(0.57)$	0.07281	$0.0729^{+0.0015}_{-0.0014}$
$r$	0.000	$< 0.145$	$z_{re}$	10.09	$10.1^{+2.8}_{-3.0}$	$H(0.57)$	96.12	$96.15^{+0.91}_{-0.86}$
$y_{cal}$	1.00003	$1.0002^{+0.0049}_{-0.0050}$	$10^9 A_s$	2.218	$2.22^{+0.14}_{-0.12}$	$D_A(0.57)$	1331.7	$1331^{+24}_{-24}$
$A_{217}^{CIB}$	67.7	$66^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8937	$1.893^{+0.026}_{-0.027}$	$F_{AP}(0.57)$	0.6703	$0.6700^{+0.0061}_{-0.0060}$
$\xi^{tSZ \times CIB}$	0.01	—	$D_{40}$	1205.9	$1225^{+40}_{-36}$	$f\sigma_8(0.57)$	0.4801	$0.479^{+0.011}_{-0.011}$
$A_{143}^{tSZ}$	6.16	$4.8^{+3.9}_{-3.8}$	$D_{220}$	5720	$5717^{+82}_{-81}$	$\sigma_8(0.57)$	0.6279	$0.628^{+0.018}_{-0.017}$
$A_{100}^{PS}$	264	$265^{+50}_{-50}$	$D_{810}$	2535.9	$2536^{+27}_{-27}$	$r_{0.002}$	0.000	$< 0.148$
$A_{143}^{PS}$	42.4	$47^{+20}_{-20}$	$D_{1420}$	813.1	$813^{+10}_{-9.8}$	$r_{0.01}$	0.000	$< 0.147$
$A_{143 \times 217}^{PS}$	32	$39^{+20}_{-20}$	$D_{2000}$	228.42	$228.5^{+3.7}_{-3.5}$	$\ln(10^{10} A_t)$	-4.89	$-0.2^{+1.9}_{-2.4}$
$A_{217}^{PS}$	95.7	$96^{+20}_{-20}$	$n_{s,0.002}$	0.9850	$0.986^{+0.013}_{-0.012}$	$r_{10}$	0.0002	$< 0.0749$
$A^{kSZ}$	2.0	—	$Y_P$	0.250656	$0.25065^{+0.00020}_{-0.00020}$	$10^9 A_t$	0.001	$< 0.322$
$A_{100}^{dustTT}$	7.61	$7.5^{+3.7}_{-3.7}$	$Y_P^{BBN}$	0.252001	$0.25200^{+0.00020}_{-0.00020}$	$10^9 A_t e^{-2\tau}$	0.001	$< 0.275$
$A_{143}^{dustTT}$	9.32	$9.1^{+3.5}_{-3.6}$	$10^5 D/H$	2.677	$2.679^{+0.088}_{-0.084}$	$f_{2000}^{143}$	32.4	$32^{+6}_{-6}$
$A_{143 \times 217}^{dustTT}$	18.0	$17.4^{+8.2}_{-8.1}$	$Age/Gyr$	13.400	$13.399^{+0.073}_{-0.074}$	$f_{2000}^{143 \times 217}$	34.31	$34^{+4}_{-4}$
$A_{217}^{dustTT}$	82.9	$82^{+10}_{-10}$	$z_*$	1090.22	$1090.21^{+0.84}_{-0.81}$	$f_{2000}^{217}$	107.69	$107.7^{+3.9}_{-3.9}$
$c_{100}$	0.99791	$0.9979^{+0.0016}_{-0.0015}$	$r_*$	141.66	$141.74^{+0.88}_{-0.86}$	$\chi^2_{lensing}$	9.40	$9.99 (\nu: 1.1)$
$c_{217}$	0.99614	$0.9961^{+0.0028}_{-0.0029}$	$100\theta_*$	1.04056	$1.04057^{+0.00088}_{-0.00087}$	$\chi^2_{lowTEB}$	10493.57	$10496.0 (\nu: 2.4)$
$H_0$	71.03	$71.1^{+1.9}_{-1.9}$	$D_A/Gpc$	13.614	$13.621^{+0.082}_{-0.079}$	$\chi^2_{plik}$	768.8	$781.5 (\nu: 15.4)$
$\Omega_\Lambda$	0.7107	$0.712^{+0.022}_{-0.024}$	$z_{drag}$	1061.00	$1060.98^{+0.90}_{-0.88}$	$\chi^2_{prior}$	2.4	$7.6 (\nu: 6.6)$
$\Omega_m$	0.2893	$0.288^{+0.024}_{-0.022}$	$r_{drag}$	144.21	$144.29^{+0.86}_{-0.85}$	$\chi^2_{CMB}$	11271.7	$11287.4 (\nu: 16.6)$
$\Omega_m h^2$	0.14599	$0.1457^{+0.0039}_{-0.0039}$	$k_D$	0.14267	$0.14258^{+0.00095}_{-0.00097}$			

Best-fit  $\chi^2_{eff} = 11274.14$ ;  $\bar{\chi}^2_{eff} = 11295.00$ ;  $R - 1 = 0.00927$

$\chi^2_{eff}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.40 lowl.SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10493.57 plik\_dx11dr2\_HM\_v18.TT: 768.76

## 15.6 base\_nnu\_r\_plikHM\_TTTEEE\_lowTEB\_nnup39\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022626	$0.02261^{+0.00031}_{-0.00031}$	$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.16}_{-0.15}$	$D_A/\text{Gpc}$	13.584	$13.585^{+0.055}_{-0.056}$
$\Omega_c h^2$	0.12418	$0.1242^{+0.0029}_{-0.0029}$	$A_{217}^{\text{dustTE}}$	1.66	$1.66^{+0.50}_{-0.50}$	$z_{\text{drag}}$	1061.12	$1061.09^{+0.59}_{-0.59}$
$100\theta_{\text{MC}}$	1.04034	$1.04035^{+0.00062}_{-0.00061}$	$c_{100}$	0.99811	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	143.84	$143.86^{+0.58}_{-0.58}$
$\tau$	0.0735	$0.071^{+0.028}_{-0.027}$	$c_{217}$	0.99643	$0.9962^{+0.0028}_{-0.0029}$	$k_D$	0.14308	$0.14304^{+0.00063}_{-0.00063}$
$\ln(10^{10} A_s)$	3.0904	$3.086^{+0.050}_{-0.049}$	$H_0$	70.42	$70.4^{+1.3}_{-1.3}$	$100\theta_D$	0.161642	$0.16167^{+0.00036}_{-0.00035}$
$n_s$	0.9820	$0.9821^{+0.0098}_{-0.0096}$	$\Omega_\Lambda$	0.7026	$0.702^{+0.016}_{-0.017}$	$z_{\text{eq}}$	3334	$3333^{+63}_{-62}$
$r$	0.007	$< 0.143$	$\Omega_m$	0.2974	$0.298^{+0.017}_{-0.016}$	$k_{\text{eq}}$	0.010438	$0.01044^{+0.00020}_{-0.00019}$
$y_{\text{cal}}$	0.99945	$1.0002^{+0.0048}_{-0.0049}$	$\Omega_m h^2$	0.14746	$0.1474^{+0.0028}_{-0.0027}$	$100\theta_{\text{eq}}$	0.8263	$0.826^{+0.012}_{-0.012}$
$A_{217}^{\text{CIB}}$	69.4	$66^{+10}_{-10}$	$\Omega_m h^3$	0.10383	$0.10380^{+0.00061}_{-0.00060}$	$100\theta_{s,\text{eq}}$	0.4560	$0.4560^{+0.0063}_{-0.0062}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\sigma_8$	0.8364	$0.835^{+0.017}_{-0.017}$	$r_{\text{drag}}/D_V(0.57)$	0.07229	$0.0723^{+0.0010}_{-0.00096}$
$A_{143}^{\text{tSZ}}$	7.10	$5.0^{+3.9}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	0.4561	$0.455^{+0.014}_{-0.013}$	$H(0.57)$	95.88	$95.87^{+0.61}_{-0.58}$
$A_{100}^{\text{PS}}$	262	$268^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6176	$0.616^{+0.013}_{-0.013}$	$D_A(0.57)$	1339.2	$1339^{+16}_{-17}$
$A_{143}^{\text{PS}}$	42.2	$46^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9967	$0.995^{+0.020}_{-0.020}$	$F_{\text{AP}}(0.57)$	0.67241	$0.6724^{+0.0043}_{-0.0043}$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4410	$2.436^{+0.048}_{-0.048}$	$f\sigma_8(0.57)$	0.4824	$0.4814^{+0.0098}_{-0.010}$
$A_{217}^{\text{PS}}$	95.7	$95^{+20}_{-20}$	$z_{\text{re}}$	9.61	$9.3^{+2.4}_{-2.6}$	$\sigma_8(0.57)$	0.6258	$0.625^{+0.015}_{-0.015}$
$A^{\text{kSZ}}$	0.5	—	$10^9 A_s$	2.199	$2.19^{+0.11}_{-0.11}$	$r_{0.002}$	0.006	$< 0.144$
$A_{100}^{\text{dustTT}}$	7.61	$7.6^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8980	$1.900^{+0.023}_{-0.023}$	$r_{0.01}$	0.007	$< 0.143$
$A_{143}^{\text{dustTT}}$	9.25	$9.2^{+3.6}_{-3.6}$	$D_{40}$	1211.7	$1231^{+38}_{-34}$	$\ln(10^{10} A_t)$	-1.91	$-0.2^{+1.8}_{-2.3}$
$A_{143 \times 217}^{\text{dustTT}}$	18.6	$17.5^{+8.1}_{-8.2}$	$D_{220}$	5714	$5720^{+77}_{-77}$	$r_{10}$	0.0032	$< 0.0733$
$A_{217}^{\text{dustTT}}$	82.9	$82^{+10}_{-10}$	$D_{810}$	2535.0	$2538^{+26}_{-26}$	$10^9 A_t$	0.015	$< 0.313$
$A_{100}^{\text{dustEE}}$	0.0823	$0.082^{+0.011}_{-0.011}$	$D_{1420}$	812.4	$813.3^{+9.2}_{-9.2}$	$10^9 A_t e^{-2\tau}$	0.013	$< 0.271$
$A_{100 \times 143}^{\text{dustEE}}$	0.0500	$0.0492^{+0.0099}_{-0.0096}$	$D_{2000}$	228.22	$228.4^{+3.1}_{-3.1}$	$f_{2000}^{143}$	31.8	$32^{+5}_{-5}$
$A_{100 \times 217}^{\text{dustEE}}$	0.097	$0.099^{+0.066}_{-0.064}$	$n_{s,0.002}$	0.9820	$0.9821^{+0.0098}_{-0.0096}$	$f_{2000}^{143 \times 217}$	34.26	$34.4^{+3.7}_{-3.7}$
$A_{143}^{\text{dustEE}}$	0.1013	$0.100^{+0.013}_{-0.013}$	$Y_P$	0.250658	$0.25065^{+0.00014}_{-0.00014}$	$f_{2000}^{217}$	107.48	$107.6^{+3.7}_{-3.7}$
$A_{143 \times 217}^{\text{dustEE}}$	0.220	$0.221^{+0.093}_{-0.091}$	$Y_P^{\text{BBN}}$	0.252003	$0.25200^{+0.00014}_{-0.00014}$	$\chi_{\text{lensing}}^2$	10.46	$10.7 (\nu: 1.8)$
$A_{217}^{\text{dustEE}}$	0.636	$0.65^{+0.26}_{-0.25}$	$10^5 D/H$	2.676	$2.680^{+0.060}_{-0.059}$	$\chi_{\text{lowTEB}}^2$	10493.83	$10495.9 (\nu: 1.8)$
$A_{100}^{\text{dustTE}}$	0.142	$0.143^{+0.075}_{-0.075}$	$\text{Age/Gyr}$	13.415	$13.417^{+0.050}_{-0.051}$	$\chi_{\text{plik}}^2$	2441.3	$2459.9 (\nu: 23.7)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.133^{+0.058}_{-0.058}$	$z_*$	1090.34	$1090.36^{+0.58}_{-0.58}$	$\chi_{\text{prior}}^2$	8.1	$20 (\nu: 16.1)$
$A_{100 \times 217}^{\text{dustTE}}$	0.299	$0.30^{+0.17}_{-0.17}$	$r_*$	141.31	$141.32^{+0.59}_{-0.60}$	$\chi_{\text{CMB}}^2$	12945.6	$12966.6 (\nu: 23.8)$
$A_{143}^{\text{dustTE}}$	0.154	$0.16^{+0.11}_{-0.10}$	$100\theta_*$	1.04026	$1.04026^{+0.00061}_{-0.00060}$			

Best-fit  $\chi_{\text{eff}}^2 = 12953.69$ ;  $\bar{\chi}_{\text{eff}}^2 = 12986.64$ ;  $R - 1 = 0.01320$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 10.46 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.83 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2441.31

## 15.7 base\_nnu\_r\_plikHM\_TT\_lowTEB\_nnup57\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022795	$0.02278^{+0.00047}_{-0.00047}$	$\Omega_m h^3$	0.10737	$0.1073^{+0.0010}_{-0.00099}$	$100\theta_D$	0.16209	$0.16210^{+0.00053}_{-0.00052}$
$\Omega_c h^2$	0.12442	$0.1243^{+0.0042}_{-0.0042}$	$\sigma_8$	0.8465	$0.845^{+0.020}_{-0.019}$	$z_{eq}$	3268	$3266^{+88}_{-88}$
$100\theta_{MC}$	1.04053	$1.04050^{+0.00088}_{-0.00090}$	$\sigma_8 \Omega_m^{0.5}$	0.4483	$0.447^{+0.018}_{-0.017}$	$k_{eq}$	0.010349	$0.01034^{+0.00028}_{-0.00028}$
$\tau$	0.0879	$0.084^{+0.035}_{-0.034}$	$\sigma_8 \Omega_m^{0.25}$	0.6160	$0.615^{+0.016}_{-0.015}$	$100\theta_{eq}$	0.8395	$0.840^{+0.018}_{-0.018}$
$\ln(10^{10} A_s)$	3.118	$3.115^{+0.061}_{-0.060}$	$\sigma_8/h^{0.5}$	0.9934	$0.991^{+0.022}_{-0.022}$	$100\theta_{s,eq}$	0.4627	$0.4630^{+0.0093}_{-0.0090}$
$n_s$	0.9933	$0.994^{+0.012}_{-0.012}$	$\langle d^2 \rangle^{1/2}$	2.423	$2.417^{+0.052}_{-0.050}$	$r_{drag}/D_V(0.57)$	0.07333	$0.0734^{+0.0015}_{-0.0014}$
$r$	0.004	$< 0.159$	$z_{re}$	10.89	$10.5^{+2.8}_{-3.1}$	$H(0.57)$	97.57	$97.57^{+0.95}_{-0.90}$
$y_{cal}$	0.99852	$1.0005^{+0.0050}_{-0.0049}$	$10^9 A_s$	2.260	$2.25^{+0.14}_{-0.13}$	$D_A(0.57)$	1307.3	$1307^{+24}_{-24}$
$A_{217}^{CIB}$	69.1	$66^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8955	$1.902^{+0.027}_{-0.027}$	$F_{AP}(0.57)$	0.6680	$0.6679^{+0.0060}_{-0.0058}$
$\xi^{tSZ \times CIB}$	0.00	—	$D_{40}$	1195.4	$1219^{+42}_{-38}$	$f\sigma_8(0.57)$	0.4831	$0.482^{+0.011}_{-0.011}$
$A_{143}^{tSZ}$	6.11	$4.6^{+3.8}_{-4.0}$	$D_{220}$	5704	$5722^{+81}_{-78}$	$\sigma_8(0.57)$	0.6379	$0.637^{+0.018}_{-0.018}$
$A_{100}^{PS}$	265	$269^{+50}_{-50}$	$D_{810}$	2529.7	$2539^{+27}_{-27}$	$r_{0.002}$	0.004	$< 0.167$
$A_{143}^{PS}$	44.4	$48^{+20}_{-20}$	$D_{1420}$	810.0	$813^{+10}_{-9.9}$	$r_{0.01}$	0.004	$< 0.163$
$A_{143 \times 217}^{PS}$	34	$40^{+20}_{-20}$	$D_{2000}$	227.05	$228.0^{+3.6}_{-3.5}$	$\ln(10^{10} A_t)$	-2.39	$-0.1^{+1.9}_{-2.4}$
$A_{217}^{PS}$	95.4	$96^{+20}_{-20}$	$n_{s,0.002}$	0.9933	$0.994^{+0.012}_{-0.012}$	$r_{10}$	0.0020	$< 0.0843$
$A^{kSZ}$	1.9	—	$Y_P$	0.253007	$0.25300^{+0.00021}_{-0.00021}$	$10^9 A_t$	0.009	$< 0.358$
$A_{100}^{dustTT}$	7.60	$7.6^{+3.7}_{-3.7}$	$Y_P^{BBN}$	0.254361	$0.25436^{+0.00021}_{-0.00021}$	$10^9 A_t e^{-2\tau}$	0.008	$< 0.303$
$A_{143}^{dustTT}$	9.32	$9.1^{+3.5}_{-3.6}$	$10^5 D/H$	2.705	$2.708^{+0.091}_{-0.088}$	$f_{2000}^{143}$	33.2	$33^{+6}_{-6}$
$A_{143 \times 217}^{dustTT}$	17.7	$17.4^{+8.2}_{-8.2}$	$Age/Gyr$	13.223	$13.224^{+0.074}_{-0.075}$	$f_{2000}^{143 \times 217}$	35.12	$35^{+4}_{-4}$
$A_{217}^{dustTT}$	81.3	$82^{+10}_{-10}$	$z_*$	1090.32	$1090.33^{+0.86}_{-0.85}$	$f_{2000}^{217}$	108.16	$108.4^{+4.0}_{-4.0}$
$c_{100}$	0.99787	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	140.29	$140.32^{+0.86}_{-0.84}$	$\chi^2_{lensing}$	9.48	$10.0 (\nu: 0.9)$
$c_{217}$	0.99621	$0.9962^{+0.0028}_{-0.0028}$	$100\theta_*$	1.04032	$1.04029^{+0.00086}_{-0.00088}$	$\chi^2_{lowTEB}$	10493.64	$10495.7 (\nu: 2.7)$
$H_0$	72.62	$72.6^{+2.0}_{-1.9}$	$D_A/Gpc$	13.486	$13.489^{+0.080}_{-0.079}$	$\chi^2_{plik}$	770.2	$783.1 (\nu: 15.9)$
$\Omega_\Lambda$	0.7196	$0.720^{+0.022}_{-0.023}$	$z_{drag}$	1061.69	$1061.64^{+0.93}_{-0.90}$	$\chi^2_{prior}$	2.8	$7.6 (\nu: 6.7)$
$\Omega_m$	0.2804	$0.280^{+0.023}_{-0.022}$	$r_{drag}$	142.77	$142.80^{+0.85}_{-0.83}$	$\chi^2_{CMB}$	11273.3	$11288.8 (\nu: 16.6)$
$\Omega_m h^2$	0.14786	$0.1478^{+0.0040}_{-0.0040}$	$k_D$	0.14373	$0.14368^{+0.00095}_{-0.00097}$			

Best-fit  $\chi^2_{eff} = 11276.12$ ;  $\bar{\chi}^2_{eff} = 11296.42$ ;  $R - 1 = 0.00818$

$\chi^2_{eff}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.48 lowl.SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10493.64 plik\_dx11dr2\_HM\_v18.TT: 770.22

## 15.8 base\_nnu\_r\_plikHM\_TTTEEE\_lowTEB\_nnup57\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022758	$0.02277^{+0.00031}_{-0.00032}$	$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.440	$13.446^{+0.054}_{-0.055}$
$\Omega_c h^2$	0.12677	$0.1265^{+0.0031}_{-0.0030}$	$A_{217}^{\text{dustTE}}$	1.66	$1.66^{+0.50}_{-0.50}$	$z_{\text{drag}}$	1061.76	$1061.77^{+0.61}_{-0.60}$
$100\theta_{\text{MC}}$	1.04011	$1.04013^{+0.00062}_{-0.00063}$	$c_{100}$	0.99806	$0.9980^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	142.24	$142.30^{+0.56}_{-0.58}$
$\tau$	0.0731	$0.075^{+0.027}_{-0.027}$	$c_{217}$	0.99625	$0.9963^{+0.0028}_{-0.0028}$	$k_D$	0.14429	$0.14424^{+0.00065}_{-0.00063}$
$\ln(10^{10} A_s)$	3.096	$3.099^{+0.050}_{-0.051}$	$H_0$	71.60	$71.7^{+1.4}_{-1.4}$	$100\theta_D$	0.161996	$0.16199^{+0.00037}_{-0.00034}$
$n_s$	0.9881	$0.9893^{+0.0097}_{-0.0096}$	$\Omega_\Lambda$	0.7071	$0.709^{+0.016}_{-0.017}$	$z_{\text{eq}}$	3319	$3313^{+64}_{-62}$
$r$	0.023	$< 0.156$	$\Omega_m$	0.2929	$0.291^{+0.017}_{-0.016}$	$k_{\text{eq}}$	0.010511	$0.01049^{+0.00020}_{-0.00020}$
$y_{\text{cal}}$	0.99979	$1.0002^{+0.0049}_{-0.0049}$	$\Omega_m h^2$	0.15017	$0.1499^{+0.0029}_{-0.0028}$	$100\theta_{\text{eq}}$	0.8293	$0.831^{+0.012}_{-0.012}$
$A_{217}^{\text{CIB}}$	69.8	$67^{+10}_{-10}$	$\Omega_m h^3$	0.10753	$0.10751^{+0.00064}_{-0.00065}$	$100\theta_{s,\text{eq}}$	0.4574	$0.4581^{+0.0063}_{-0.0064}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$\sigma_8$	0.8433	$0.844^{+0.018}_{-0.018}$	$r_{\text{drag}}/D_V(0.57)$	0.07252	$0.0726^{+0.0010}_{-0.0010}$
$A_{143}^{\text{tSZ}}$	6.44	$4.8^{+3.9}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	0.4564	$0.456^{+0.014}_{-0.014}$	$H(0.57)$	97.15	$97.21^{+0.62}_{-0.61}$
$A_{100}^{\text{PS}}$	268	$271^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6204	$0.620^{+0.013}_{-0.014}$	$D_A(0.57)$	1319.3	$1318^{+17}_{-16}$
$A_{143}^{\text{PS}}$	43.5	$48^{+10}_{-20}$	$\sigma_8/h^{0.5}$	0.9966	$0.997^{+0.020}_{-0.021}$	$F_{\text{AP}}(0.57)$	0.67125	$0.6708^{+0.0044}_{-0.0042}$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4305	$2.429^{+0.047}_{-0.048}$	$f\sigma_8(0.57)$	0.4851	$0.485^{+0.010}_{-0.010}$
$A_{217}^{\text{PS}}$	94.5	$95^{+20}_{-20}$	$z_{\text{re}}$	9.61	$9.7^{+2.5}_{-2.6}$	$\sigma_8(0.57)$	0.6321	$0.633^{+0.015}_{-0.015}$
$A^{\text{kSZ}}$	2.0	—	$10^9 A_s$	2.211	$2.22^{+0.11}_{-0.11}$	$r_{0.002}$	0.022	$< 0.161$
$A_{100}^{\text{dustTT}}$	7.71	$7.7^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.9100	$1.910^{+0.023}_{-0.023}$	$r_{0.01}$	0.023	$< 0.158$
$A_{143}^{\text{dustTT}}$	9.35	$9.3^{+3.6}_{-3.5}$	$D_{40}$	1210.6	$1224^{+39}_{-36}$	$\ln(10^{10} A_t)$	-0.68	$-0.1^{+1.8}_{-2.3}$
$A_{143 \times 217}^{\text{dustTT}}$	17.9	$17.6^{+8.3}_{-8.1}$	$D_{220}$	5718	$5720^{+75}_{-75}$	$r_{10}$	0.0112	$< 0.0819$
$A_{217}^{\text{dustTT}}$	81.5	$82^{+10}_{-10}$	$D_{810}$	2538.7	$2540^{+26}_{-26}$	$10^9 A_t$	0.051	$< 0.344$
$A_{100}^{\text{dustEE}}$	0.0823	$0.082^{+0.011}_{-0.011}$	$D_{1420}$	811.9	$812.7^{+9.3}_{-9.4}$	$10^9 A_t e^{-2\tau}$	0.044	$< 0.296$
$A_{100 \times 143}^{\text{dustEE}}$	0.0500	$0.0496^{+0.0098}_{-0.0099}$	$D_{2000}$	227.41	$227.7^{+3.1}_{-3.1}$	$f_{2000}^{143}$	33.2	$33^{+5}_{-5}$
$A_{100 \times 217}^{\text{dustEE}}$	0.101	$0.099^{+0.063}_{-0.064}$	$n_{s,0.002}$	0.9881	$0.9893^{+0.0097}_{-0.0096}$	$f_{2000}^{143 \times 217}$	35.27	$35.1^{+3.7}_{-3.7}$
$A_{143}^{\text{dustEE}}$	0.1013	$0.101^{+0.014}_{-0.013}$	$Y_P$	0.252991	$0.25300^{+0.00014}_{-0.00014}$	$f_{2000}^{217}$	108.40	$108.3^{+3.7}_{-3.7}$
$A_{143 \times 217}^{\text{dustEE}}$	0.220	$0.219^{+0.090}_{-0.090}$	$Y_P^{\text{BBN}}$	0.254345	$0.25435^{+0.00014}_{-0.00014}$	$\chi_{\text{lensing}}^2$	10.43	$11.0 (\nu: 1.9)$
$A_{217}^{\text{dustEE}}$	0.637	$0.64^{+0.26}_{-0.26}$	$10^5 D/H$	2.712	$2.709^{+0.062}_{-0.059}$	$\chi_{\text{lowTEB}}^2$	10493.60	$10495.4 (\nu: 2.0)$
$A_{100}^{\text{dustTE}}$	0.142	$0.142^{+0.074}_{-0.074}$	$\text{Age/Gyr}$	13.249	$13.245^{+0.051}_{-0.050}$	$\chi_{\text{plik}}^2$	2446.4	$2464.5 (\nu: 24.4)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.133^{+0.057}_{-0.057}$	$z_*$	1090.56	$1090.52^{+0.61}_{-0.58}$	$\chi_{\text{prior}}^2$	8.3	$20 (\nu: 16.3)$
$A_{100 \times 217}^{\text{dustTE}}$	0.300	$0.30^{+0.17}_{-0.16}$	$r_*$	139.76	$139.82^{+0.58}_{-0.60}$	$\chi_{\text{CMB}}^2$	12950.5	$12970.9 (\nu: 24.2)$
$A_{143}^{\text{dustTE}}$	0.154	$0.16^{+0.11}_{-0.10}$	$100\theta_*$	1.03989	$1.03992^{+0.00061}_{-0.00062}$			

Best-fit  $\chi_{\text{eff}}^2 = 12958.73$ ;  $\bar{\chi}_{\text{eff}}^2 = 12991.26$ ;  $R - 1 = 0.01465$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 10.43 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.60 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2446.42

## 16 nnu+yhe

### 16.1 base\_nnu\_yhe\_plikHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02226	$0.02231^{+0.00075}_{-0.00071}$	$\Omega_\Lambda$	0.6831	$0.688^{+0.041}_{-0.045}$	$D_A/\text{Gpc}$	13.99	$13.88^{+0.81}_{-0.83}$
$\Omega_c h^2$	0.1178	$0.120^{+0.015}_{-0.015}$	$\Omega_m$	0.3169	$0.312^{+0.045}_{-0.041}$	$z_{\text{drag}}$	1059.82	$1060.0^{+2.7}_{-2.6}$
$100\theta_{\text{MC}}$	1.04150	$1.0411^{+0.0037}_{-0.0038}$	$\Omega_m h^2$	0.1407	$0.143^{+0.015}_{-0.015}$	$r_{\text{drag}}$	148.5	$147.2^{+9.1}_{-9.2}$
$\tau$	0.0787	$0.081^{+0.044}_{-0.041}$	$\Omega_m h^3$	0.0938	$0.097^{+0.020}_{-0.019}$	$k_D$	0.1394	$0.1406^{+0.0086}_{-0.0085}$
$N_{\text{eff}}$	2.91	$3.1^{+1.1}_{-1.1}$	$\sigma_8$	0.8275	$0.833^{+0.050}_{-0.046}$	$100\theta_D$	0.16108	$0.1612^{+0.0016}_{-0.0015}$
$Y_P$	0.256	$0.250^{+0.058}_{-0.065}$	$\sigma_8 \Omega_m^{0.5}$	0.4658	$0.465^{+0.027}_{-0.026}$	$z_{\text{eq}}$	3409	$3387^{+180}_{-170}$
$\ln(10^{10} A_s)$	3.089	$3.097^{+0.095}_{-0.091}$	$\sigma_8 \Omega_m^{0.25}$	0.6209	$0.622^{+0.029}_{-0.027}$	$k_{\text{eq}}$	0.010310	$0.01035^{+0.00045}_{-0.00044}$
$n_s$	0.9656	$0.969^{+0.031}_{-0.031}$	$\sigma_8/h^{0.5}$	1.0137	$1.013^{+0.039}_{-0.039}$	$100\theta_{\text{eq}}$	0.8121	$0.816^{+0.032}_{-0.031}$
$y_{\text{cal}}$	1.00027	$1.0004^{+0.0048}_{-0.0050}$	$\langle d^2 \rangle^{1/2}$	2.501	$2.497^{+0.096}_{-0.095}$	$100\theta_{s,\text{eq}}$	0.4488	$0.451^{+0.016}_{-0.016}$
$A_{217}^{\text{CIB}}$	67.4	$64^{+10}_{-10}$	$z_{\text{re}}$	10.06	$10.2^{+3.7}_{-4.0}$	$r_{\text{drag}}/D_V(0.57)$	0.07131	$0.0716^{+0.0023}_{-0.0022}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.196	$2.22^{+0.22}_{-0.20}$	$H(0.57)$	92.1	$93.2^{+7.3}_{-7.2}$
$A_{143}^{\text{tSZ}}$	7.09	$5.0^{+3.8}_{-3.9}$	$10^9 A_s e^{-2\tau}$	1.876	$1.882^{+0.049}_{-0.053}$	$D_A(0.57)$	1405	$1387^{+130}_{-120}$
$A_{100}^{\text{PS}}$	255	$260^{+60}_{-60}$	$D_{40}$	1234.3	$1233^{+45}_{-44}$	$F_{\text{AP}}(0.57)$	0.6774	$0.676^{+0.011}_{-0.011}$
$A_{143}^{\text{PS}}$	39.9	$45^{+20}_{-20}$	$D_{220}$	5715	$5718^{+81}_{-83}$	$f\sigma_8(0.57)$	0.4825	$0.484^{+0.023}_{-0.022}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{810}$	2534.1	$2535^{+27}_{-28}$	$\sigma_8(0.57)$	0.6143	$0.620^{+0.045}_{-0.042}$
$A_{217}^{\text{PS}}$	97.8	$97^{+20}_{-20}$	$D_{1420}$	814.3	$814^{+10}_{-10}$	$f_{2000}^{143}$	30.2	$31^{+7}_{-7}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.10	$229.9^{+4.7}_{-4.7}$	$f_{2000}^{143 \times 217}$	32.7	$33^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.41	$7.4^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9656	$0.969^{+0.031}_{-0.031}$	$f_{2000}^{217}$	106.4	$106.5^{+5.2}_{-5.2}$
$A_{143}^{\text{dustTT}}$	9.06	$9.0^{+3.6}_{-3.6}$	$Y_P$	0.256	$0.250^{+0.058}_{-0.065}$	$\chi_{\text{lowTEB}}^2$	10496.4	$10497.4 (\nu: 4.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.1^{+8.2}_{-8.2}$	$Y_P^{\text{BBN}}$	0.257	$0.252^{+0.058}_{-0.065}$	$\chi_{\text{plik}}^2$	763.4	$779.1 (\nu: 19.0)$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	Age/Gyr	13.93	$13.79^{+0.98}_{-0.97}$	$\chi_{\text{prior}}^2$	2.1	$7.4 (\nu: 6.4)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1090.24	$1090.2^{+1.4}_{-1.4}$	$\chi_{\text{CMB}}^2$	11259.8	$11276.5 (\nu: 17.3)$
$c_{217}$	0.99601	$0.9960^{+0.0029}_{-0.0028}$	$r_*$	145.7	$144.5^{+8.8}_{-8.9}$			
$H_0$	66.6	$67.8^{+7.3}_{-7.2}$	$100\theta_*$	1.04144	$1.0411^{+0.0027}_{-0.0026}$			

Best-fit  $\chi_{\text{eff}}^2 = 11261.85$ ;  $\bar{\chi}_{\text{eff}}^2 = 11283.88$ ;  $R - 1 = 0.00751$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.38 plik\_dx11dr2\_HM\_v18\_TT: 763.42

## 16.2 base\_nnu\_yhe\_plikHM\_TT\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02234	$0.02234^{+0.00050}_{-0.00050}$	$\Omega_m$	0.3091	$0.309^{+0.018}_{-0.017}$	$r_{\text{drag}}$	147.4	$146.8^{+7.6}_{-7.6}$
$\Omega_c h^2$	0.1189	$0.120^{+0.014}_{-0.014}$	$\Omega_m h^2$	0.1419	$0.143^{+0.014}_{-0.014}$	$k_D$	0.1402	$0.1409^{+0.0075}_{-0.0070}$
$100\theta_{\text{MC}}$	1.04118	$1.0410^{+0.0036}_{-0.0036}$	$\Omega_m h^3$	0.0962	$0.098^{+0.016}_{-0.015}$	$100\theta_D$	0.16116	$0.1612^{+0.0014}_{-0.0014}$
$\tau$	0.0827	$0.082^{+0.036}_{-0.036}$	$\sigma_8$	0.8322	$0.834^{+0.042}_{-0.039}$	$z_{\text{eq}}$	3377	$3374^{+88}_{-86}$
$N_{\text{eff}}$	3.04	$3.13^{+0.88}_{-0.88}$	$\sigma_8 \Omega_m^{0.5}$	0.4627	$0.463^{+0.022}_{-0.021}$	$k_{\text{eq}}$	0.010306	$0.01035^{+0.00044}_{-0.00044}$
$Y_P$	0.252	$0.249^{+0.058}_{-0.063}$	$\sigma_8 \Omega_m^{0.25}$	0.6205	$0.622^{+0.029}_{-0.027}$	$100\theta_{\text{eq}}$	0.8179	$0.819^{+0.015}_{-0.014}$
$\ln(10^{10} A_s)$	3.099	$3.100^{+0.073}_{-0.073}$	$\sigma_8/h^{0.5}$	1.0110	$1.011^{+0.038}_{-0.037}$	$100\theta_{s,\text{eq}}$	0.4518	$0.4521^{+0.0076}_{-0.0075}$
$n_s$	0.9705	$0.971^{+0.018}_{-0.017}$	$\langle d^2 \rangle^{1/2}$	2.491	$2.491^{+0.083}_{-0.082}$	$r_{\text{drag}}/D_V(0.57)$	0.07171	$0.07174^{+0.00094}_{-0.00091}$
$y_{\text{cal}}$	1.00028	$1.0004^{+0.0049}_{-0.0050}$	$z_{\text{re}}$	10.40	$10.3^{+3.3}_{-3.4}$	$H(0.57)$	93.1	$93.6^{+5.2}_{-5.2}$
$A_{217}^{\text{CIB}}$	67.3	$64^{+10}_{-10}$	$10^9 A_s$	2.218	$2.22^{+0.17}_{-0.16}$	$D_A(0.57)$	1385	$1379^{+80}_{-80}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$10^9 A_s e^{-2\tau}$	1.8798	$1.884^{+0.046}_{-0.048}$	$F_{\text{AP}}(0.57)$	0.67541	$0.6753^{+0.0045}_{-0.0045}$
$A_{143}^{\text{tSZ}}$	7.12	$5.0^{+3.8}_{-3.9}$	$D_{40}$	1228.4	$1230^{+34}_{-33}$	$f\sigma_8(0.57)$	0.4832	$0.484^{+0.023}_{-0.021}$
$A_{100}^{\text{PS}}$	254	$260^{+60}_{-60}$	$D_{220}$	5716	$5719^{+80}_{-81}$	$\sigma_8(0.57)$	0.6197	$0.622^{+0.033}_{-0.031}$
$A_{143}^{\text{PS}}$	39.6	$45^{+20}_{-20}$	$D_{810}$	2534.6	$2535^{+28}_{-28}$	$f_{2000}^{143}$	30.0	$31^{+7}_{-7}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{1420}$	814.5	$814^{+10}_{-10}$	$f_{2000}^{143 \times 217}$	32.6	$33^{+6}_{-6}$
$A_{217}^{\text{PS}}$	97.8	$97^{+20}_{-20}$	$D_{2000}$	230.08	$229.8^{+4.8}_{-4.7}$	$f_{2000}^{217}$	106.3	$106.6^{+5.1}_{-5.3}$
$A^{\text{kSZ}}$	0.0	—	$n_{s,0.002}$	0.9705	$0.971^{+0.018}_{-0.017}$	$\chi_{\text{lowTEB}}^2$	10495.99	$10496.9 (\nu: 3.2)$
$A_{100}^{\text{dustTT}}$	7.52	$7.4^{+3.7}_{-3.7}$	$Y_P$	0.252	$0.249^{+0.058}_{-0.063}$	$\chi_{\text{plik}}^2$	763.9	$778.9 (\nu: 18.0)$
$A_{143}^{\text{dustTT}}$	9.03	$9.0^{+3.6}_{-3.5}$	$Y_P^{\text{BBN}}$	0.254	$0.251^{+0.058}_{-0.064}$	$\chi_{6\text{DF}}^2$	0.015	$0.063 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.1}_{-8.3}$	Age/Gyr	13.79	$13.73^{+0.73}_{-0.73}$	$\chi_{\text{MGS}}^2$	1.34	$1.47 (\nu: 0.2)$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$z_*$	1090.14	$1090.2^{+1.3}_{-1.3}$	$\chi_{\text{DR11CMass}}^2$	2.42	$2.97 (\nu: 0.3)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.7	$144.1^{+7.5}_{-7.5}$	$\chi_{\text{DR11LOWZ}}^2$	0.54	$0.68 (\nu: 0.2)$
$c_{217}$	0.99597	$0.9960^{+0.0029}_{-0.0029}$	$100\theta_*$	1.04119	$1.0411^{+0.0025}_{-0.0024}$	$\chi_{\text{prior}}^2$	2.0	$7.4 (\nu: 6.4)$
$H_0$	67.76	$68.1^{+4.4}_{-4.4}$	$D_A/\text{Gpc}$	13.90	$13.84^{+0.68}_{-0.69}$	$\chi_{\text{CMB}}^2$	11259.9	$11275.8 (\nu: 16.4)$
$\Omega_\Lambda$	0.6909	$0.691^{+0.017}_{-0.018}$	$z_{\text{drag}}$	1060.05	$1060.1^{+2.2}_{-2.2}$	$\chi_{\text{BAO}}^2$	4.33	$5.2 (\nu: 0.7)$

Best-fit  $\chi_{\text{eff}}^2 = 11266.29$ ;  $\bar{\chi}_{\text{eff}}^2 = 11288.34$ ;  $R - 1 = 0.00475$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.34 DR11CMass: 2.42 DR11LOWZ: 0.54 CMB - lowl.SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10495.99 plik\_dx11dr2\_HM\_v18\_TT: 763.93



### 16.3 base\_nnu\_yhe\_plikHM\_TT\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02240	$0.02241^{+0.00065}_{-0.00063}$	$\Omega_\Lambda$	0.6955	$0.696^{+0.031}_{-0.033}$	$D_A/\text{Gpc}$	13.75	$13.72^{+0.61}_{-0.60}$
$\Omega_c h^2$	0.1216	$0.122^{+0.013}_{-0.012}$	$\Omega_m$	0.3045	$0.304^{+0.033}_{-0.031}$	$z_{\text{drag}}$	1060.12	$1060.2^{+2.6}_{-2.4}$
$100\theta_{\text{MC}}$	1.04060	$1.0406^{+0.0032}_{-0.0032}$	$\Omega_m h^2$	0.1447	$0.145^{+0.013}_{-0.012}$	$r_{\text{drag}}$	145.7	$145.4^{+6.8}_{-6.6}$
$\tau$	0.0858	$0.085^{+0.042}_{-0.040}$	$\Omega_m h^3$	0.0997	$0.101^{+0.015}_{-0.014}$	$k_D$	0.1418	$0.1421^{+0.0066}_{-0.0063}$
$N_{\text{eff}}$	3.24	$3.29^{+0.82}_{-0.76}$	$\sigma_8$	0.8401	$0.841^{+0.041}_{-0.039}$	$100\theta_D$	0.16115	$0.1613^{+0.0015}_{-0.0015}$
$Y_P$	0.244	$0.244^{+0.055}_{-0.060}$	$\sigma_8 \Omega_m^{0.5}$	0.4636	$0.463^{+0.026}_{-0.025}$	$z_{\text{eq}}$	3355	$3351^{+130}_{-120}$
$\ln(10^{10} A_s)$	3.110	$3.109^{+0.086}_{-0.082}$	$\sigma_8 \Omega_m^{0.25}$	0.6241	$0.624^{+0.028}_{-0.027}$	$k_{\text{eq}}$	0.010372	$0.01039^{+0.00043}_{-0.00041}$
$n_s$	0.9735	$0.975^{+0.025}_{-0.024}$	$\sigma_8/h^{0.5}$	1.0119	$1.011^{+0.039}_{-0.039}$	$100\theta_{\text{eq}}$	0.8217	$0.823^{+0.023}_{-0.023}$
$y_{\text{cal}}$	1.00037	$1.0004^{+0.0049}_{-0.0050}$	$\langle d^2 \rangle^{1/2}$	2.492	$2.488^{+0.090}_{-0.089}$	$100\theta_{s,\text{eq}}$	0.4538	$0.454^{+0.012}_{-0.012}$
$A_{217}^{\text{CIB}}$	66.7	$64^{+10}_{-10}$	$z_{\text{re}}$	10.68	$10.5^{+3.5}_{-3.8}$	$r_{\text{drag}}/D_V(0.57)$	0.07193	$0.0720^{+0.0018}_{-0.0017}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.07	—	$10^9 A_s$	2.241	$2.24^{+0.20}_{-0.19}$	$H(0.57)$	94.4	$94.7^{+5.1}_{-4.9}$
$A_{143}^{\text{tSZ}}$	7.03	$5.0^{+3.8}_{-3.9}$	$10^9 A_s e^{-2\tau}$	1.8881	$1.890^{+0.041}_{-0.043}$	$D_A(0.57)$	1364	$1360^{+86}_{-80}$
$A_{100}^{\text{PS}}$	254	$261^{+60}_{-60}$	$D_{40}$	1228.0	$1228^{+41}_{-41}$	$F_{\text{AP}}(0.57)$	0.6743	$0.6740^{+0.0083}_{-0.0080}$
$A_{143}^{\text{PS}}$	40.5	$45^{+20}_{-20}$	$D_{220}$	5720	$5721^{+81}_{-81}$	$f\sigma_8(0.57)$	0.4866	$0.486^{+0.022}_{-0.021}$
$A_{143 \times 217}^{\text{PS}}$	35	$39^{+20}_{-20}$	$D_{810}$	2536.3	$2536^{+28}_{-28}$	$\sigma_8(0.57)$	0.6267	$0.627^{+0.035}_{-0.033}$
$A_{217}^{\text{PS}}$	98.4	$97^{+20}_{-20}$	$D_{1420}$	815.0	$814^{+10}_{-10}$	$f_{2000}^{143}$	29.8	$31^{+7}_{-7}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.26	$229.8^{+4.8}_{-4.7}$	$f_{2000}^{143 \times 217}$	32.5	$33^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.43	$7.4^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9735	$0.975^{+0.025}_{-0.024}$	$f_{2000}^{217}$	106.1	$106.5^{+5.1}_{-5.3}$
$A_{143}^{\text{dustTT}}$	9.04	$9.0^{+3.6}_{-3.6}$	$Y_P$	0.244	$0.244^{+0.055}_{-0.060}$	$\chi_{\text{lowTEB}}^2$	10496.1	$10497.0 (\nu: 3.7)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.2}_{-8.2}$	$Y_P^{\text{BBN}}$	0.245	$0.245^{+0.055}_{-0.060}$	$\chi_{\text{plik}}^2$	764.2	$779.4 (\nu: 18.5)$
$A_{217}^{\text{dustTT}}$	82.2	$82^{+10}_{-10}$	Age/Gyr	13.61	$13.58^{+0.69}_{-0.66}$	$\chi_{\text{H070p6}}^2$	0.25	$0.72 (\nu: 0.5)$
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1090.03	$1090.1^{+1.3}_{-1.3}$	$\chi_{\text{prior}}^2$	2.0	$7.4 (\nu: 6.4)$
$c_{217}$	0.99596	$0.9960^{+0.0029}_{-0.0029}$	$r_*$	143.1	$142.8^{+6.7}_{-6.5}$	$\chi_{\text{CMB}}^2$	11260.3	$11276.3 (\nu: 16.7)$
$H_0$	68.92	$69.2^{+4.9}_{-4.8}$	$100\theta_*$	1.04077	$1.0407^{+0.0022}_{-0.0021}$			

Best-fit  $\chi_{\text{eff}}^2 = 11262.50$ ;  $\bar{\chi}_{\text{eff}}^2 = 11284.44$ ;  $R - 1 = 0.00516$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.11 plik\_dx11dr2\_HM\_v18\_TT: 764.18 Hubble - H070p6: 0.25

## 16.4 base\_nnu\_yhe\_plikHM\_TT\_lowTEB\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02236	$0.02237^{+0.00050}_{-0.00050}$	$\Omega_m h^2$	0.1446	$0.145^{+0.013}_{-0.012}$	$100\theta_D$	0.16110	$0.1612^{+0.0014}_{-0.0014}$
$\Omega_c h^2$	0.1216	$0.122^{+0.013}_{-0.012}$	$\Omega_m h^3$	0.0994	$0.100^{+0.014}_{-0.013}$	$z_{\text{eq}}$	3359	$3359^{+75}_{-75}$
$100\theta_{\text{MC}}$	1.04051	$1.0405^{+0.0032}_{-0.0032}$	$\sigma_8$	0.8385	$0.839^{+0.039}_{-0.037}$	$k_{\text{eq}}$	0.010377	$0.01040^{+0.00040}_{-0.00038}$
$\tau$	0.0842	$0.083^{+0.036}_{-0.036}$	$\sigma_8 \Omega_m^{0.5}$	0.4639	$0.464^{+0.022}_{-0.021}$	$100\theta_{\text{eq}}$	0.8209	$0.821^{+0.013}_{-0.013}$
$N_{\text{eff}}$	3.23	$3.27^{+0.78}_{-0.72}$	$\sigma_8 \Omega_m^{0.25}$	0.6236	$0.624^{+0.028}_{-0.027}$	$100\theta_{\text{s,eq}}$	0.4533	$0.4534^{+0.0066}_{-0.0065}$
$Y_P$	0.242	$0.243^{+0.054}_{-0.059}$	$\sigma_8/h^{0.5}$	1.0113	$1.011^{+0.038}_{-0.037}$	$r_{\text{drag}}/D_V(0.57)$	0.07185	$0.07187^{+0.00088}_{-0.00085}$
$\ln(10^{10} A_s)$	3.106	$3.104^{+0.073}_{-0.073}$	$\langle d^2 \rangle^{1/2}$	2.493	$2.489^{+0.083}_{-0.083}$	$H(0.57)$	94.23	$94.5^{+4.4}_{-4.3}$
$n_s$	0.9719	$0.973^{+0.017}_{-0.017}$	$z_{\text{re}}$	10.54	$10.4^{+3.3}_{-3.4}$	$D_A(0.57)$	1367	$1364^{+67}_{-66}$
$y_{\text{cal}}$	1.00026	$1.0004^{+0.0049}_{-0.0050}$	$10^9 A_s$	2.233	$2.23^{+0.17}_{-0.16}$	$F_{\text{AP}}(0.57)$	0.67464	$0.6746^{+0.0041}_{-0.0040}$
$A_{217}^{\text{CIB}}$	67.4	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8869	$1.890^{+0.041}_{-0.043}$	$f\sigma_8(0.57)$	0.4860	$0.486^{+0.022}_{-0.021}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1229.8	$1230^{+34}_{-33}$	$\sigma_8(0.57)$	0.6251	$0.626^{+0.031}_{-0.029}$
$A_{143}^{\text{tSZ}}$	7.20	$5.0^{+3.8}_{-3.9}$	$D_{220}$	5718	$5720^{+80}_{-80}$	$f_{2000}^{143}$	29.9	$31^{+7}_{-7}$
$A_{100}^{\text{PS}}$	253	$260^{+60}_{-60}$	$D_{810}$	2534.9	$2536^{+28}_{-28}$	$f_{2000}^{143 \times 217}$	32.4	$33^{+6}_{-6}$
$A_{143}^{\text{PS}}$	39.1	$45^{+20}_{-20}$	$D_{1420}$	814.5	$814^{+10}_{-10}$	$f_{2000}^{217}$	106.0	$106.5^{+5.1}_{-5.3}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{2000}$	230.15	$229.8^{+4.8}_{-4.7}$	$\chi_{\text{lowTEB}}^2$	10496.20	$10496.8 (\nu: 3.2)$
$A_{217}^{\text{PS}}$	97.1	$97^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9719	$0.973^{+0.017}_{-0.017}$	$\chi_{\text{plik}}^2$	763.9	$779.0 (\nu: 17.7)$
$A^{\text{kSZ}}$	0.0	—	$Y_P$	0.242	$0.243^{+0.054}_{-0.059}$	$\chi_{\text{H070p6}}^2$	0.31	$0.55 (\nu: 0.2)$
$A_{100}^{\text{dustTT}}$	7.54	$7.4^{+3.7}_{-3.7}$	$Y_P^{\text{BBN}}$	0.243	$0.244^{+0.054}_{-0.059}$	$\chi_{\text{JLA}}^2$	706.614	$706.66 (\nu: 0.0)$
$A_{143}^{\text{dustTT}}$	8.99	$9.0^{+3.6}_{-3.5}$	Age/Gyr	13.63	$13.60^{+0.62}_{-0.60}$	$\chi_{\text{6DF}}^2$	0.003	$0.046 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.2^{+8.2}_{-8.3}$	$z_*$	1090.02	$1090.1^{+1.3}_{-1.3}$	$\chi_{\text{MGS}}^2$	1.54	$1.64 (\nu: 0.2)$
$A_{217}^{\text{dustTT}}$	81.8	$82^{+10}_{-10}$	$r_*$	143.1	$142.9^{+6.5}_{-6.3}$	$\chi_{\text{DR11CMass}}^2$	2.43	$2.91 (\nu: 0.2)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04074	$1.0407^{+0.0022}_{-0.0021}$	$\chi_{\text{DR11LOWZ}}^2$	0.38	$0.50 (\nu: 0.1)$
$c_{217}$	0.99588	$0.9960^{+0.0029}_{-0.0029}$	$D_A/\text{Gpc}$	13.75	$13.73^{+0.60}_{-0.58}$	$\chi_{\text{prior}}^2$	2.1	$7.4 (\nu: 6.5)$
$H_0$	68.75	$69.0^{+3.7}_{-3.5}$	$z_{\text{drag}}$	1060.01	$1060.1^{+2.2}_{-2.2}$	$\chi_{\text{CMB}}^2$	11260.1	$11275.8 (\nu: 16.3)$
$\Omega_\Lambda$	0.6940	$0.694^{+0.016}_{-0.016}$	$r_{\text{drag}}$	145.8	$145.5^{+6.6}_{-6.4}$	$\chi_{\text{BAO}}^2$	4.35	$5.1 (\nu: 0.5)$
$\Omega_m$	0.3060	$0.306^{+0.016}_{-0.016}$	$k_D$	0.1418	$0.1420^{+0.0065}_{-0.0062}$			

Best-fit  $\chi_{\text{eff}}^2 = 11973.47$ ;  $\bar{\chi}_{\text{eff}}^2 = 11995.51$ ;  $R - 1 = 0.00542$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.54 DR11CMass: 2.43 DR11LOWZ: 0.38 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.20 plik\_dx11dr2\_HM\_v18\_TT: 763.91  
Hubble - H070p6: 0.31 SN - JLA December\_2013: 706.61

## 16.5 base\_nnu\_yhe\_plikHM\_TT\_lowTEB\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02226	$0.02233^{+0.00073}_{-0.00069}$	$\Omega_\Lambda$	0.6917	$0.695^{+0.038}_{-0.040}$	$D_A/\text{Gpc}$	13.95	$13.87^{+0.77}_{-0.77}$
$\Omega_c h^2$	0.1179	$0.119^{+0.014}_{-0.014}$	$\Omega_m$	0.3083	$0.305^{+0.040}_{-0.038}$	$z_{\text{drag}}$	1059.63	$1059.9^{+2.7}_{-2.5}$
$100\theta_{\text{MC}}$	1.04119	$1.0411^{+0.0037}_{-0.0037}$	$\Omega_m h^2$	0.1408	$0.142^{+0.015}_{-0.014}$	$r_{\text{drag}}$	148.0	$147.1^{+8.6}_{-8.6}$
$\tau$	0.0666	$0.069^{+0.041}_{-0.038}$	$\Omega_m h^3$	0.0952	$0.098^{+0.019}_{-0.018}$	$k_D$	0.1399	$0.1406^{+0.0082}_{-0.0075}$
$N_{\text{eff}}$	3.00	$3.1^{+1.0}_{-1.0}$	$\sigma_8$	0.8146	$0.820^{+0.043}_{-0.041}$	$100\theta_D$	0.16098	$0.1612^{+0.0015}_{-0.0015}$
$Y_P$	0.248	$0.247^{+0.057}_{-0.062}$	$\sigma_8 \Omega_m^{0.5}$	0.4523	$0.452^{+0.017}_{-0.018}$	$z_{\text{eq}}$	3370	$3355^{+160}_{-160}$
$\ln(10^{10} A_s)$	3.063	$3.071^{+0.086}_{-0.082}$	$\sigma_8 \Omega_m^{0.25}$	0.6070	$0.608^{+0.019}_{-0.019}$	$k_{\text{eq}}$	0.010255	$0.01028^{+0.00042}_{-0.00041}$
$n_s$	0.9679	$0.971^{+0.031}_{-0.029}$	$\sigma_8/h^{0.5}$	0.9909	$0.991^{+0.023}_{-0.023}$	$100\theta_{\text{eq}}$	0.8190	$0.822^{+0.030}_{-0.031}$
$y_{\text{cal}}$	1.00009	$1.0002^{+0.0047}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.449	$2.446^{+0.058}_{-0.057}$	$100\theta_{s,\text{eq}}$	0.4525	$0.454^{+0.016}_{-0.015}$
$A_{217}^{\text{CIB}}$	67.6	$65^{+10}_{-10}$	$z_{\text{re}}$	8.89	$9.1^{+3.5}_{-3.9}$	$r_{\text{drag}}/D_V(0.57)$	0.07178	$0.0720^{+0.0022}_{-0.0022}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.139	$2.16^{+0.19}_{-0.19}$	$H(0.57)$	92.8	$93.7^{+6.9}_{-6.4}$
$A_{143}^{\text{tSZ}}$	7.24	$4.9^{+3.8}_{-3.9}$	$10^9 A_s e^{-2\tau}$	1.8721	$1.877^{+0.046}_{-0.050}$	$D_A(0.57)$	1389	$1377^{+120}_{-110}$
$A_{100}^{\text{PS}}$	254	$262^{+60}_{-60}$	$D_{40}$	1224.3	$1222^{+41}_{-42}$	$F_{\text{AP}}(0.57)$	0.6752	$0.674^{+0.010}_{-0.010}$
$A_{143}^{\text{PS}}$	39.0	$45^{+20}_{-20}$	$D_{220}$	5714	$5717^{+81}_{-83}$	$f\sigma_8(0.57)$	0.4728	$0.474^{+0.017}_{-0.017}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{810}$	2532.4	$2533^{+27}_{-28}$	$\sigma_8(0.57)$	0.6068	$0.612^{+0.040}_{-0.040}$
$A_{217}^{\text{PS}}$	96.9	$96^{+20}_{-20}$	$D_{1420}$	815.0	$814^{+10}_{-10}$	$f_{2000}^{143}$	29.9	$31^{+7}_{-7}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.19	$229.6^{+4.7}_{-4.6}$	$f_{2000}^{143 \times 217}$	32.6	$33^{+5}_{-6}$
$A_{100}^{\text{dustTT}}$	7.52	$7.5^{+3.7}_{-3.8}$	$n_{s,0.002}$	0.9679	$0.971^{+0.031}_{-0.029}$	$f_{2000}^{217}$	106.1	$106.7^{+5.1}_{-5.2}$
$A_{143}^{\text{dustTT}}$	9.11	$9.1^{+3.6}_{-3.6}$	$Y_P$	0.248	$0.247^{+0.057}_{-0.062}$	$\chi^2_{\text{lensing}}$	9.26	$10.1 (\nu: 1.3)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.3^{+8.2}_{-8.3}$	$Y_P^{\text{BBN}}$	0.249	$0.249^{+0.057}_{-0.063}$	$\chi^2_{\text{lowTEB}}$	10494.86	$10495.6 (\nu: 2.1)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	Age/Gyr	13.84	$13.74^{+0.92}_{-0.90}$	$\chi^2_{\text{plik}}$	766.2	$781.2 (\nu: 17.6)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1089.96	$1090.0^{+1.4}_{-1.3}$	$\chi^2_{\text{prior}}$	2.1	$7.5 (\nu: 6.5)$
$c_{217}$	0.99602	$0.9960^{+0.0029}_{-0.0028}$	$r_*$	145.3	$144.4^{+8.4}_{-8.4}$	$\chi^2_{\text{CMB}}$	11270.3	$11286.9 (\nu: 17.1)$
$H_0$	67.6	$68.5^{+6.9}_{-6.4}$	$100\theta_*$	1.04134	$1.0412^{+0.0026}_{-0.0025}$			

Best-fit  $\chi^2_{\text{eff}} = 11272.41$ ;  $\bar{\chi}^2_{\text{eff}} = 11294.42$ ;  $R - 1 = 0.01240$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.26 lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.85 plik\_dx11dr2\_HM\_v18.TT: 766.16

## 16.6 base\_nnu\_yhe\_plikHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022192	$0.02221^{+0.00048}_{-0.00048}$	$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.058}_{-0.057}$	Age/Gyr	14.13	$14.08^{+0.57}_{-0.59}$
$\Omega_c h^2$	0.1147	$0.1155^{+0.0096}_{-0.0087}$	$A_{100 \times 217}^{\text{dust}TE}$	0.301	$0.30^{+0.17}_{-0.17}$	$z_*$	1090.24	$1090.24^{+0.88}_{-0.87}$
$100\theta_{\text{MC}}$	1.04216	$1.0420^{+0.0025}_{-0.0025}$	$A_{143}^{\text{dust}TE}$	0.155	$0.15^{+0.11}_{-0.11}$	$r_*$	147.7	$147.3^{+5.5}_{-5.6}$
$\tau$	0.0798	$0.080^{+0.035}_{-0.036}$	$A_{143 \times 217}^{\text{dust}TE}$	0.335	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04200	$1.0419^{+0.0019}_{-0.0019}$
$N_{\text{eff}}$	2.69	$2.75^{+0.63}_{-0.57}$	$A_{217}^{\text{dust}TE}$	1.66	$1.67^{+0.51}_{-0.50}$	$D_A/\text{Gpc}$	14.18	$14.13^{+0.50}_{-0.52}$
$Y_P$	0.2629	$0.261^{+0.034}_{-0.036}$	$c_{100}$	0.99816	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.59	$1059.7^{+1.8}_{-1.8}$
$\ln(10^{10} A_s)$	3.086	$3.088^{+0.073}_{-0.075}$	$c_{217}$	0.99598	$0.9960^{+0.0029}_{-0.0028}$	$r_{\text{drag}}$	150.5	$150.0^{+5.7}_{-5.8}$
$n_s$	0.9608	$0.962^{+0.019}_{-0.019}$	$H_0$	65.36	$65.7^{+3.9}_{-3.6}$	$k_D$	0.13768	$0.1381^{+0.0052}_{-0.0048}$
$y_{\text{cal}}$	1.00035	$1.0004^{+0.0048}_{-0.0049}$	$\Omega_\Lambda$	0.6780	$0.680^{+0.023}_{-0.024}$	$100\theta_D$	0.16096	$0.16101^{+0.00094}_{-0.00094}$
$A_{217}^{\text{CIB}}$	66.8	$64^{+10}_{-10}$	$\Omega_m$	0.3220	$0.320^{+0.024}_{-0.023}$	$z_{\text{eq}}$	3433	$3426^{+91}_{-94}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.08	—	$\Omega_m h^2$	0.1375	$0.1383^{+0.0096}_{-0.0088}$	$k_{\text{eq}}$	0.010228	$0.01024^{+0.00031}_{-0.00029}$
$A_{143}^{\text{tSZ}}$	7.17	$5.3^{+3.6}_{-3.8}$	$\Omega_m h^3$	0.0899	$0.091^{+0.011}_{-0.011}$	$100\theta_{\text{eq}}$	0.8080	$0.809^{+0.017}_{-0.016}$
$A_{100}^{\text{PS}}$	256	$260^{+50}_{-50}$	$\sigma_8$	0.8215	$0.823^{+0.036}_{-0.035}$	$100\theta_{\text{s,eq}}$	0.4468	$0.4475^{+0.0086}_{-0.0082}$
$A_{143}^{\text{PS}}$	39.9	$44^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4661	$0.466^{+0.019}_{-0.019}$	$r_{\text{drag}}/D_V(0.57)$	0.07108	$0.0712^{+0.0012}_{-0.0011}$
$A_{143 \times 217}^{\text{PS}}$	35.2	$41^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6188	$0.619^{+0.024}_{-0.023}$	$H(0.57)$	90.67	$91.1^{+4.1}_{-3.8}$
$A_{217}^{\text{PS}}$	98.5	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0162	$1.015^{+0.034}_{-0.034}$	$D_A(0.57)$	1429	$1423^{+70}_{-71}$
$A^{\text{kSZ}}$	0.00	$< 7.93$	$\langle d^2 \rangle^{1/2}$	2.513	$2.511^{+0.077}_{-0.078}$	$F_{\text{AP}}(0.57)$	0.6787	$0.6783^{+0.0059}_{-0.0059}$
$A_{100}^{\text{dust}TT}$	7.40	$7.5^{+3.7}_{-3.7}$	$z_{\text{re}}$	10.13	$10.1^{+3.3}_{-3.4}$	$f\sigma_8(0.57)$	0.4803	$0.481^{+0.019}_{-0.018}$
$A_{143}^{\text{dust}TT}$	8.95	$8.9^{+3.6}_{-3.5}$	$10^9 A_s$	2.189	$2.19^{+0.16}_{-0.16}$	$\sigma_8(0.57)$	0.6086	$0.610^{+0.030}_{-0.029}$
$A_{143 \times 217}^{\text{dust}TT}$	17.5	$17.0^{+8.1}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8662	$1.869^{+0.040}_{-0.040}$	$f_{2000}^{143}$	29.6	$30^{+6}_{-6}$
$A_{217}^{\text{dust}TT}$	81.8	$82^{+10}_{-10}$	$D_{40}$	1241.0	$1241^{+32}_{-32}$	$f_{2000}^{143 \times 217}$	32.44	$33^{+4}_{-4}$
$A_{100}^{\text{dust}EE}$	0.0808	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5723	$5725^{+75}_{-76}$	$f_{2000}^{217}$	106.08	$106.2^{+4.2}_{-4.2}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0482	$0.0483^{+0.0098}_{-0.0098}$	$D_{810}$	2534.1	$2535^{+27}_{-27}$	$\chi_{\text{lowTEB}}^2$	10497.29	$10498.0 (\nu: 2.9)$
$A_{100 \times 217}^{\text{dust}EE}$	0.100	$0.0995^{+0.064}_{-0.064}$	$D_{1420}$	814.8	$814.7^{+9.4}_{-9.5}$	$\chi_{\text{plik}}^2$	2430.2	$2450.9 (\nu: 24.7)$
$A_{143}^{\text{dust}EE}$	0.0998	$0.0997^{+0.014}_{-0.014}$	$D_{2000}$	230.51	$230.4^{+3.6}_{-3.6}$	$\chi_{\text{prior}}^2$	6.8	$19.3 (\nu: 15.3)$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.223^{+0.091}_{-0.091}$	$n_{s,0.002}$	0.9608	$0.962^{+0.019}_{-0.019}$	$\chi_{\text{CMB}}^2$	12927.5	$12949.0 (\nu: 23.8)$
$A_{217}^{\text{dust}EE}$	0.647	$0.65^{+0.26}_{-0.26}$	$Y_P$	0.2629	$0.261^{+0.034}_{-0.036}$			
$A_{100}^{\text{dust}TE}$	0.139	$0.141^{+0.075}_{-0.074}$	$Y_P^{\text{BBN}}$	0.2643	$0.263^{+0.034}_{-0.037}$			

Best-fit  $\chi_{\text{eff}}^2 = 12934.29$ ;  $\bar{\chi}_{\text{eff}}^2 = 12968.23$ ;  $R - 1 = 0.00734$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10497.29 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2430.19

## 16.7 base\_nnu\_yhe\_plikHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022314	$0.02232^{+0.00039}_{-0.00039}$	$A_{100 \times 217}^{\text{dustTE}}$	0.305	$0.30^{+0.17}_{-0.17}$	$r_*$	147.0	$146.6^{+5.3}_{-5.4}$
$\Omega_c h^2$	0.1151	$0.1160^{+0.0094}_{-0.0093}$	$A_{143}^{\text{dustTE}}$	0.153	$0.15^{+0.11}_{-0.11}$	$100\theta_*$	1.04184	$1.0417^{+0.0018}_{-0.0018}$
$100\theta_{\text{MC}}$	1.04197	$1.0419^{+0.0025}_{-0.0025}$	$A_{143 \times 217}^{\text{dustTE}}$	0.337	$0.33^{+0.15}_{-0.16}$	$D_A/\text{Gpc}$	14.113	$14.07^{+0.49}_{-0.50}$
$\tau$	0.0878	$0.085^{+0.033}_{-0.034}$	$A_{217}^{\text{dustTE}}$	1.67	$1.66^{+0.50}_{-0.50}$	$z_{\text{drag}}$	1059.86	$1060.0^{+1.6}_{-1.6}$
$N_{\text{eff}}$	2.79	$2.84^{+0.59}_{-0.58}$	$c_{100}$	0.99819	$0.9982^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	149.8	$149.3^{+5.5}_{-5.6}$
$Y_{\text{P}}$	0.2608	$0.261^{+0.035}_{-0.037}$	$c_{217}$	0.99593	$0.9960^{+0.0029}_{-0.0028}$	$k_{\text{D}}$	0.13828	$0.1386^{+0.0050}_{-0.0050}$
$\ln(10^{10} A_{\text{s}})$	3.103	$3.099^{+0.066}_{-0.069}$	$H_0$	66.38	$66.6^{+3.2}_{-3.0}$	$100\theta_{\text{D}}$	0.16098	$0.16108^{+0.00093}_{-0.00093}$
$n_{\text{s}}$	0.9664	$0.966^{+0.015}_{-0.015}$	$\Omega_{\Lambda}$	0.6868	$0.687^{+0.015}_{-0.015}$	$z_{\text{eq}}$	3400	$3400^{+67}_{-67}$
$y_{\text{cal}}$	1.00035	$1.0005^{+0.0049}_{-0.0050}$	$\Omega_{\text{m}}$	0.3132	$0.313^{+0.015}_{-0.015}$	$k_{\text{eq}}$	0.010197	$0.01023^{+0.00031}_{-0.00029}$
$A_{217}^{\text{CIB}}$	64.8	$64^{+10}_{-10}$	$\Omega_{\text{m}} h^2$	0.1380	$0.1389^{+0.0095}_{-0.0094}$	$100\theta_{\text{eq}}$	0.8141	$0.814^{+0.012}_{-0.011}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.33	—	$\Omega_{\text{m}} h^3$	0.0916	$0.093^{+0.010}_{-0.010}$	$100\theta_{\text{s,eq}}$	0.4499	$0.4499^{+0.0059}_{-0.0058}$
$A_{143}^{\text{tSZ}}$	6.98	$5.3^{+3.6}_{-3.8}$	$\sigma_8$	0.8277	$0.828^{+0.034}_{-0.034}$	$r_{\text{drag}}/D_{\text{V}}(0.57)$	0.07153	$0.07153^{+0.00080}_{-0.00077}$
$A_{100}^{\text{PS}}$	253	$261^{+60}_{-60}$	$\sigma_8 \Omega_{\text{m}}^{0.5}$	0.4632	$0.463^{+0.018}_{-0.018}$	$H(0.57)$	91.49	$91.8^{+3.7}_{-3.5}$
$A_{143}^{\text{PS}}$	43.6	$44^{+20}_{-20}$	$\sigma_8 \Omega_{\text{m}}^{0.25}$	0.6192	$0.619^{+0.024}_{-0.023}$	$D_A(0.57)$	1412	$1408^{+60}_{-59}$
$A_{143 \times 217}^{\text{PS}}$	42.7	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0159	$1.014^{+0.034}_{-0.034}$	$F_{\text{AP}}(0.57)$	0.67646	$0.6765^{+0.0039}_{-0.0038}$
$A_{217}^{\text{PS}}$	101.7	$98^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.509	$2.505^{+0.076}_{-0.077}$	$f\sigma_8(0.57)$	0.4817	$0.482^{+0.019}_{-0.018}$
$A^{\text{kSZ}}$	0.00	$< 7.95$	$z_{\text{re}}$	10.81	$10.5^{+3.0}_{-3.1}$	$\sigma_8(0.57)$	0.6153	$0.615^{+0.026}_{-0.026}$
$A_{100}^{\text{dustTT}}$	7.47	$7.5^{+3.6}_{-3.7}$	$10^9 A_{\text{s}}$	2.226	$2.22^{+0.15}_{-0.15}$	$f_{2000}^{143}$	28.9	$30^{+6}_{-6}$
$A_{143}^{\text{dustTT}}$	8.99	$9.0^{+3.6}_{-3.6}$	$10^9 A_{\text{s}} e^{-2\tau}$	1.8675	$1.871^{+0.039}_{-0.039}$	$f_{2000}^{143 \times 217}$	32.08	$33^{+4}_{-4}$
$A_{143 \times 217}^{\text{dustTT}}$	17.9	$17.1^{+8.2}_{-8.2}$	$D_{40}$	1234.7	$1236^{+30}_{-29}$	$f_{2000}^{217}$	105.57	$106.2^{+4.2}_{-4.2}$
$A_{217}^{\text{dustTT}}$	82.3	$82^{+10}_{-10}$	$D_{220}$	5724	$5728^{+74}_{-76}$	$\chi_{\text{lowTEB}}^2$	10497.26	$10497.7 (\nu: 3.3)$
$A_{100}^{\text{dustEE}}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{810}$	2534.6	$2535^{+27}_{-27}$	$\chi_{\text{plik}}^2$	2430.7	$2451.2 (\nu: 46.9)$
$A_{100 \times 143}^{\text{dustEE}}$	0.0489	$0.0488^{+0.0097}_{-0.0096}$	$D_{1420}$	815.7	$814.7^{+9.3}_{-9.6}$	$\chi_{6\text{DF}}^2$	0.047	$0.084 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dustEE}}$	0.0996	$0.0995^{+0.065}_{-0.063}$	$D_{2000}$	230.88	$230.3^{+3.7}_{-3.6}$	$\chi_{\text{MGS}}^2$	1.10	$1.17 (\nu: 0.1)$
$A_{143}^{\text{dustEE}}$	0.1002	$0.100^{+0.014}_{-0.014}$	$n_{\text{s}, 0.002}$	0.9664	$0.966^{+0.015}_{-0.015}$	$\chi_{\text{DR11CMass}}^2$	2.56	$2.97 (\nu: 0.3)$
$A_{143 \times 217}^{\text{dustEE}}$	0.223	$0.223^{+0.090}_{-0.090}$	$Y_{\text{P}}$	0.2608	$0.261^{+0.035}_{-0.037}$	$\chi_{\text{DR11LOWZ}}^2$	0.81	$0.94 (\nu: 0.2)$
$A_{217}^{\text{dustEE}}$	0.650	$0.65^{+0.26}_{-0.26}$	$Y_{\text{P}}^{\text{BBN}}$	0.2622	$0.262^{+0.035}_{-0.037}$	$\chi_{\text{prior}}^2$	6.8	$19.5 (\nu: 15.5)$
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.075}_{-0.074}$	Age/Gyr	14.02	$13.99^{+0.52}_{-0.53}$	$\chi_{\text{CMB}}^2$	12928.0	$12948.9 (\nu: 46.1)$
$A_{100 \times 143}^{\text{dustTE}}$	0.130	$0.131^{+0.059}_{-0.057}$	$z_*$	1090.07	$1090.16^{+0.85}_{-0.87}$	$\chi_{\text{BAO}}^2$	4.52	$5.2 (\nu: 0.6)$

Best-fit  $\chi_{\text{eff}}^2 = 12939.26$ ;  $\bar{\chi}_{\text{eff}}^2 = 12973.52$ ;  $R - 1 = 0.01202$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.05 MGS: 1.10 DR11CMass: 2.56 DR11LOWZ: 0.81 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10497.26 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2430.70

## 16.8 base\_nnu\_yhe\_plikHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022313	$0.02232^{+0.00045}_{-0.00045}$	$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.059}_{-0.057}$	Age/Gyr	13.93	$13.90^{+0.52}_{-0.51}$
$\Omega_c h^2$	0.1171	$0.1178^{+0.0092}_{-0.0084}$	$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.16}_{-0.17}$	$z_*$	1090.13	$1090.17^{+0.86}_{-0.88}$
$100\theta_{\text{MC}}$	1.04154	$1.0415^{+0.0024}_{-0.0024}$	$A_{143}^{\text{dust}TE}$	0.151	$0.15^{+0.11}_{-0.11}$	$r_*$	145.9	$145.6^{+5.1}_{-5.0}$
$\tau$	0.0853	$0.083^{+0.035}_{-0.035}$	$A_{143 \times 217}^{\text{dust}TE}$	0.338	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04148	$1.0414^{+0.0018}_{-0.0017}$
$N_{\text{eff}}$	2.90	$2.94^{+0.58}_{-0.54}$	$A_{217}^{\text{dust}TE}$	1.68	$1.67^{+0.50}_{-0.51}$	$D_A/\text{Gpc}$	14.013	$13.98^{+0.46}_{-0.47}$
$Y_P$	0.2565	$0.256^{+0.035}_{-0.037}$	$c_{100}$	0.99819	$0.9982^{+0.0015}_{-0.0016}$	$z_{\text{drag}}$	1059.93	$1060.0^{+1.7}_{-1.7}$
$\ln(10^{10} A_s)$	3.102	$3.099^{+0.070}_{-0.073}$	$c_{217}$	0.99589	$0.9960^{+0.0029}_{-0.0029}$	$r_{\text{drag}}$	148.7	$148.3^{+5.2}_{-5.2}$
$n_s$	0.9664	$0.967^{+0.017}_{-0.017}$	$H_0$	66.76	$67.0^{+3.4}_{-3.3}$	$k_D$	0.13924	$0.1395^{+0.0048}_{-0.0045}$
$y_{\text{cal}}$	1.00022	$1.0005^{+0.0048}_{-0.0050}$	$\Omega_\Lambda$	0.6856	$0.686^{+0.021}_{-0.022}$	$100\theta_D$	0.16101	$0.16107^{+0.00094}_{-0.00094}$
$A_{217}^{\text{CIB}}$	65.3	$64^{+10}_{-10}$	$\Omega_m$	0.3144	$0.314^{+0.022}_{-0.021}$	$z_{\text{eq}}$	3401	$3399^{+85}_{-81}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.24	—	$\Omega_m h^2$	0.1401	$0.1407^{+0.0093}_{-0.0085}$	$k_{\text{eq}}$	0.010276	$0.01029^{+0.00031}_{-0.00029}$
$A_{143}^{\text{tSZ}}$	7.06	$5.3^{+3.6}_{-3.8}$	$\Omega_m h^3$	0.0935	$0.0943^{+0.010}_{-0.0095}$	$100\theta_{\text{eq}}$	0.8136	$0.814^{+0.015}_{-0.015}$
$A_{100}^{\text{PS}}$	254	$261^{+60}_{-50}$	$\sigma_8$	0.8309	$0.831^{+0.034}_{-0.034}$	$100\theta_{\text{s,eq}}$	0.4496	$0.4499^{+0.0077}_{-0.0077}$
$A_{143}^{\text{PS}}$	42.4	$44^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4659	$0.465^{+0.020}_{-0.019}$	$r_{\text{drag}}/D_V(0.57)$	0.07144	$0.0715^{+0.0011}_{-0.0011}$
$A_{143 \times 217}^{\text{PS}}$	40.3	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6222	$0.622^{+0.024}_{-0.023}$	$H(0.57)$	92.08	$92.3^{+3.6}_{-3.5}$
$A_{217}^{\text{PS}}$	100.9	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0170	$1.015^{+0.034}_{-0.034}$	$D_A(0.57)$	1403	$1400^{+63}_{-60}$
$A^{\text{kSZ}}$	0.00	$< 7.96$	$\langle d^2 \rangle^{1/2}$	2.510	$2.506^{+0.077}_{-0.078}$	$F_{\text{AP}}(0.57)$	0.6768	$0.6766^{+0.0055}_{-0.0053}$
$A_{100}^{\text{dust}TT}$	7.41	$7.5^{+3.6}_{-3.6}$	$z_{\text{re}}$	10.62	$10.4^{+3.2}_{-3.3}$	$f\sigma_8(0.57)$	0.4839	$0.483^{+0.018}_{-0.018}$
$A_{143}^{\text{dust}TT}$	8.93	$9.0^{+3.6}_{-3.6}$	$10^9 A_s$	2.224	$2.22^{+0.16}_{-0.16}$	$\sigma_8(0.57)$	0.6174	$0.617^{+0.028}_{-0.028}$
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.0^{+8.2}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8750	$1.877^{+0.037}_{-0.038}$	$f_{2000}^{143}$	29.2	$30^{+6}_{-6}$
$A_{217}^{\text{dust}TT}$	82.0	$82^{+10}_{-10}$	$D_{40}$	1236.4	$1237^{+31}_{-31}$	$f_{2000}^{143 \times 217}$	32.24	$33^{+4}_{-4}$
$A_{100}^{\text{dust}EE}$	0.0812	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5725	$5728^{+75}_{-76}$	$f_{2000}^{217}$	105.76	$106.2^{+4.2}_{-4.2}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0488	$0.0489^{+0.0097}_{-0.0097}$	$D_{810}$	2535.3	$2536^{+27}_{-27}$	$\chi_{\text{lowTEB}}^2$	10497.14	$10497.7 (\nu: 3.1)$
$A_{100 \times 217}^{\text{dust}EE}$	0.098	$0.0998^{+0.065}_{-0.063}$	$D_{1420}$	815.1	$814.6^{+9.4}_{-9.5}$	$\chi_{\text{plik}}^2$	2430.7	$2451.6 (\nu: 45.1)$
$A_{143}^{\text{dust}EE}$	0.1002	$0.100^{+0.014}_{-0.013}$	$D_{2000}$	230.56	$230.2^{+3.6}_{-3.6}$	$\chi_{\text{H070p6}}^2$	1.34	$1.4 (\nu: 0.7)$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.223^{+0.091}_{-0.090}$	$n_{\text{s},0.002}$	0.9664	$0.967^{+0.017}_{-0.017}$	$\chi_{\text{prior}}^2$	6.9	$19.5 (\nu: 15.7)$
$A_{217}^{\text{dust}EE}$	0.652	$0.65^{+0.26}_{-0.26}$	$Y_P$	0.2565	$0.256^{+0.035}_{-0.037}$	$\chi_{\text{CMB}}^2$	12927.9	$12949.3 (\nu: 44.5)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.075}_{-0.074}$	$Y_P^{\text{BBN}}$	0.2578	$0.257^{+0.035}_{-0.037}$			

Best-fit  $\chi_{\text{eff}}^2 = 12936.07$ ;  $\bar{\chi}_{\text{eff}}^2 = 12970.28$ ;  $R - 1 = 0.01172$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10497.14 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2430.72 Hubble - H070p6: 1.33

## 16.9 base\_nnu\_yhe\_plikHM\_TTTEEE\_lowTEB\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022384	$0.02238^{+0.00037}_{-0.00038}$	$A_{143}^{\text{dust}TE}$	0.153	$0.15^{+0.11}_{-0.11}$	$D_A/\text{Gpc}$	13.977	$13.96^{+0.45}_{-0.46}$
$\Omega_c h^2$	0.1174	$0.1179^{+0.0093}_{-0.0085}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.33^{+0.16}_{-0.16}$	$z_{\text{drag}}$	1060.12	$1060.1^{+1.5}_{-1.6}$
$100\theta_{\text{MC}}$	1.04153	$1.0414^{+0.0024}_{-0.0024}$	$A_{217}^{\text{dust}TE}$	1.66	$1.66^{+0.50}_{-0.50}$	$r_{\text{drag}}$	148.2	$148.0^{+5.1}_{-5.1}$
$\tau$	0.0881	$0.086^{+0.032}_{-0.034}$	$c_{100}$	0.99815	$0.9982^{+0.0015}_{-0.0016}$	$k_D$	0.13953	$0.1398^{+0.0047}_{-0.0045}$
$N_{\text{eff}}$	2.94	$2.98^{+0.57}_{-0.52}$	$c_{217}$	0.99602	$0.9960^{+0.0029}_{-0.0029}$	$100\theta_D$	0.16109	$0.16111^{+0.00093}_{-0.00094}$
$Y_P$	0.2572	$0.256^{+0.035}_{-0.038}$	$H_0$	67.30	$67.4^{+2.9}_{-2.8}$	$z_{\text{eq}}$	3387	$3384^{+62}_{-61}$
$\ln(10^{10} A_s)$	3.108	$3.105^{+0.064}_{-0.068}$	$\Omega_\Lambda$	0.6899	$0.690^{+0.014}_{-0.014}$	$k_{\text{eq}}$	0.010266	$0.01028^{+0.00031}_{-0.00028}$
$n_s$	0.9690	$0.969^{+0.014}_{-0.014}$	$\Omega_m$	0.3101	$0.310^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	0.8165	$0.817^{+0.011}_{-0.011}$
$y_{\text{cal}}$	1.00026	$1.0005^{+0.0048}_{-0.0050}$	$\Omega_m h^2$	0.1404	$0.1409^{+0.0094}_{-0.0085}$	$100\theta_{s,\text{eq}}$	0.4511	$0.4513^{+0.0055}_{-0.0054}$
$A_{217}^{\text{CIB}}$	67.0	$64^{+10}_{-10}$	$\Omega_m h^3$	0.0945	$0.0951^{+0.010}_{-0.0091}$	$r_{\text{drag}}/D_V(0.57)$	0.07167	$0.07168^{+0.00075}_{-0.00073}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.05	—	$\sigma_8$	0.8333	$0.833^{+0.032}_{-0.032}$	$H(0.57)$	92.53	$92.7^{+3.3}_{-3.2}$
$A_{143}^{\text{tSZ}}$	7.20	$5.3^{+3.6}_{-3.9}$	$\sigma_8 \Omega_m^{0.5}$	0.4640	$0.464^{+0.018}_{-0.017}$	$D_A(0.57)$	1394	$1392^{+54}_{-53}$
$A_{100}^{\text{PS}}$	256	$261^{+60}_{-60}$	$\sigma_8 \Omega_m^{0.25}$	0.6218	$0.621^{+0.023}_{-0.023}$	$F_{\text{AP}}(0.57)$	0.67567	$0.6756^{+0.0036}_{-0.0035}$
$A_{143}^{\text{PS}}$	39.5	$44^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0157	$1.014^{+0.034}_{-0.034}$	$f\sigma_8(0.57)$	0.4841	$0.484^{+0.018}_{-0.018}$
$A_{143 \times 217}^{\text{PS}}$	34.2	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.506	$2.502^{+0.076}_{-0.078}$	$\sigma_8(0.57)$	0.6202	$0.620^{+0.025}_{-0.025}$
$A_{217}^{\text{PS}}$	98.0	$98^{+20}_{-20}$	$z_{\text{re}}$	10.86	$10.6^{+2.9}_{-3.1}$	$f_{2000}^{143}$	29.6	$30^{+6}_{-6}$
$A^{\text{kSZ}}$	0.00	$< 8.00$	$10^9 A_s$	2.238	$2.23^{+0.15}_{-0.15}$	$f_{2000}^{143 \times 217}$	32.41	$33^{+4}_{-4}$
$A_{100}^{\text{dust}TT}$	7.45	$7.5^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8763	$1.878^{+0.037}_{-0.038}$	$f_{2000}^{217}$	106.07	$106.2^{+4.1}_{-4.2}$
$A_{143}^{\text{dust}TT}$	8.99	$9.0^{+3.7}_{-3.6}$	$D_{40}$	1233.8	$1234^{+29}_{-29}$	$\chi_{\text{lowTEB}}^2$	10497.07	$10497.5 (\nu: 3.2)$
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.1^{+8.2}_{-8.2}$	$D_{220}$	5728	$5729^{+75}_{-76}$	$\chi_{\text{plik}}^2$	2431.0	$2451.6 (\nu: 25.3)$
$A_{217}^{\text{dust}TT}$	81.9	$82^{+10}_{-10}$	$D_{810}$	2534.9	$2536^{+27}_{-27}$	$\chi_{\text{H070p6}}^2$	0.99	$1.09 (\nu: 0.4)$
$A_{100}^{\text{dust}EE}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	814.7	$814.7^{+9.3}_{-9.5}$	$\chi_{\text{JLA}}^2$	706.709	$706.75 (\nu: 0.0)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0488	$0.0492^{+0.0096}_{-0.0095}$	$D_{2000}$	230.29	$230.2^{+3.7}_{-3.6}$	$\chi_{6\text{DF}}^2$	0.022	$0.053 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.0996^{+0.064}_{-0.063}$	$n_{s,0.002}$	0.9690	$0.969^{+0.014}_{-0.014}$	$\chi_{\text{MGS}}^2$	1.28	$1.36 (\nu: 0.1)$
$A_{143}^{\text{dust}EE}$	0.1002	$0.100^{+0.014}_{-0.013}$	$Y_P$	0.2572	$0.256^{+0.035}_{-0.038}$	$\chi_{\text{DR11CMass}}^2$	2.44	$2.79 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.222	$0.222^{+0.090}_{-0.090}$	$Y_P^{\text{BBN}}$	0.2586	$0.257^{+0.035}_{-0.038}$	$\chi_{\text{DR11LOWZ}}^2$	0.61	$0.70 (\nu: 0.1)$
$A_{217}^{\text{dust}EE}$	0.649	$0.65^{+0.26}_{-0.26}$	$\text{Age/Gyr}$	13.873	$13.85^{+0.48}_{-0.47}$	$\chi_{\text{prior}}^2$	7.2	$19.6 (\nu: 15.5)$
$A_{100}^{\text{dust}TE}$	0.140	$0.141^{+0.075}_{-0.075}$	$z_*$	1090.11	$1090.12^{+0.85}_{-0.86}$	$\chi_{\text{CMB}}^2$	12928.0	$12949.1 (\nu: 23.7)$
$A_{100 \times 143}^{\text{dust}TE}$	0.130	$0.131^{+0.060}_{-0.057}$	$r_*$	145.6	$145.3^{+5.0}_{-5.0}$	$\chi_{\text{BAO}}^2$	4.35	$4.91 (\nu: 0.3)$
$A_{100 \times 217}^{\text{dust}TE}$	0.303	$0.30^{+0.17}_{-0.17}$	$100\theta_*$	1.04143	$1.0414^{+0.0018}_{-0.0017}$			

Best-fit  $\chi_{\text{eff}}^2 = 13647.30$ ;  $\bar{\chi}_{\text{eff}}^2 = 13681.50$ ;  $R - 1 = 0.01798$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.02 MGS: 1.28 DR11CMass: 2.44 DR11LOWZ: 0.61 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10497.07 plik\_dx11dr2\_HM\_v18\_TTTEEE:

## 16.10 base\_nnu\_yhe\_plikHM\_TTTEEE\_lowTEB\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022159	$0.02217^{+0.00047}_{-0.00050}$	$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.059}_{-0.057}$	Age/Gyr	14.16	$14.11^{+0.55}_{-0.58}$
$\Omega_c h^2$	0.1138	$0.1148^{+0.0091}_{-0.0084}$	$A_{100 \times 217}^{\text{dust}TE}$	0.305	$0.31^{+0.16}_{-0.16}$	$z_*$	1090.11	$1090.14^{+0.85}_{-0.87}$
$100\theta_{MC}$	1.04223	$1.0421^{+0.0024}_{-0.0024}$	$A_{143}^{\text{dust}TE}$	0.155	$0.16^{+0.11}_{-0.10}$	$r_*$	148.1	$147.6^{+5.3}_{-5.4}$
$\tau$	0.0616	$0.061^{+0.030}_{-0.028}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.15}_{-0.16}$	$100\theta_*$	1.04213	$1.0420^{+0.0018}_{-0.0018}$
$N_{\text{eff}}$	2.67	$2.73^{+0.61}_{-0.58}$	$A_{217}^{\text{dust}TE}$	1.67	$1.67^{+0.51}_{-0.52}$	$D_A/\text{Gpc}$	14.213	$14.16^{+0.49}_{-0.50}$
$Y_P$	0.2611	$0.259^{+0.036}_{-0.037}$	$c_{100}$	0.99813	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.40	$1059.4^{+1.7}_{-1.8}$
$\ln(10^{10} A_s)$	3.046	$3.048^{+0.060}_{-0.058}$	$c_{217}$	0.99609	$0.9960^{+0.0029}_{-0.0028}$	$r_{\text{drag}}$	150.9	$150.4^{+5.5}_{-5.6}$
$n_s$	0.9600	$0.961^{+0.018}_{-0.019}$	$H_0$	65.40	$65.7^{+3.9}_{-3.5}$	$k_D$	0.13738	$0.1379^{+0.0050}_{-0.0049}$
$y_{\text{cal}}$	0.99999	$1.0002^{+0.0049}_{-0.0050}$	$\Omega_\Lambda$	0.6807	$0.681^{+0.023}_{-0.023}$	$100\theta_D$	0.16089	$0.16094^{+0.00091}_{-0.00096}$
$A_{217}^{\text{CIB}}$	67.7	$65^{+10}_{-10}$	$\Omega_m$	0.3193	$0.319^{+0.023}_{-0.023}$	$z_{\text{eq}}$	3421	$3418^{+92}_{-91}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$\Omega_m h^2$	0.1366	$0.1376^{+0.0092}_{-0.0084}$	$k_{\text{eq}}$	0.010175	$0.01021^{+0.00029}_{-0.00028}$
$A_{143}^{\text{tSZ}}$	7.29	$5.3^{+3.7}_{-3.9}$	$\Omega_m h^3$	0.0893	$0.090^{+0.011}_{-0.010}$	$100\theta_{\text{eq}}$	0.8101	$0.811^{+0.017}_{-0.016}$
$A_{100}^{\text{PS}}$	257	$262^{+60}_{-60}$	$\sigma_8$	0.8028	$0.805^{+0.028}_{-0.027}$	$100\theta_{\text{s,eq}}$	0.4479	$0.4482^{+0.0085}_{-0.0082}$
$A_{143}^{\text{PS}}$	39.1	$44^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4537	$0.454^{+0.014}_{-0.013}$	$r_{\text{drag}}/D_V(0.57)$	0.07124	$0.0713^{+0.0012}_{-0.0011}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6035	$0.605^{+0.016}_{-0.016}$	$H(0.57)$	90.55	$90.9^{+4.0}_{-3.6}$
$A_{217}^{\text{PS}}$	97.1	$97^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9927	$0.993^{+0.021}_{-0.021}$	$D_A(0.57)$	1430	$1424^{+68}_{-70}$
$A^{\text{kSZ}}$	0.00	$< 8.31$	$\langle d^2 \rangle^{1/2}$	2.460	$2.461^{+0.050}_{-0.052}$	$F_{\text{AP}}(0.57)$	0.6780	$0.6779^{+0.0058}_{-0.0059}$
$A_{100}^{\text{dust}TT}$	7.43	$7.5^{+3.7}_{-3.7}$	$z_{\text{re}}$	8.41	$8.3^{+2.7}_{-2.9}$	$f\sigma_8(0.57)$	0.4687	$0.470^{+0.013}_{-0.013}$
$A_{143}^{\text{dust}TT}$	9.07	$9.1^{+3.6}_{-3.6}$	$10^9 A_s$	2.103	$2.11^{+0.13}_{-0.13}$	$\sigma_8(0.57)$	0.5954	$0.597^{+0.025}_{-0.024}$
$A_{143 \times 217}^{\text{dust}TT}$	17.7	$17.2^{+8.1}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8591	$1.863^{+0.039}_{-0.038}$	$f_{2000}^{143}$	29.9	$30^{+6}_{-6}$
$A_{217}^{\text{dust}TT}$	82.0	$82^{+10}_{-10}$	$D_{40}$	1232.8	$1234^{+31}_{-30}$	$f_{2000}^{143 \times 217}$	32.73	$33^{+4}_{-4}$
$A_{100}^{\text{dust}EE}$	0.0806	$0.081^{+0.012}_{-0.011}$	$D_{220}$	5719	$5721^{+74}_{-78}$	$f_{2000}^{217}$	106.27	$106.4^{+4.1}_{-4.2}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0482	$0.0485^{+0.0097}_{-0.010}$	$D_{810}$	2531.5	$2533^{+27}_{-27}$	$\chi^2_{\text{lensing}}$	9.59	$10.4 (\nu: 1.7)$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.0998^{+0.065}_{-0.064}$	$D_{1420}$	814.8	$814.8^{+9.4}_{-9.6}$	$\chi^2_{\text{lowTEB}}$	10495.75	$10496.4 (\nu: 1.5)$
$A_{143}^{\text{dust}EE}$	0.0996	$0.0999^{+0.014}_{-0.014}$	$D_{2000}$	230.24	$230.2^{+3.5}_{-3.6}$	$\chi^2_{\text{plik}}$	2433.5	$2453.9 (\nu: 26.0)$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.224^{+0.092}_{-0.092}$	$n_{s,0.002}$	0.9600	$0.961^{+0.018}_{-0.019}$	$\chi^2_{\text{prior}}$	6.9	$19.4 (\nu: 15.4)$
$A_{217}^{\text{dust}EE}$	0.659	$0.65^{+0.26}_{-0.26}$	$Y_P$	0.2611	$0.259^{+0.036}_{-0.037}$	$\chi^2_{\text{CMB}}$	12938.8	$12960.6 (\nu: 25.8)$
$A_{100}^{\text{dust}TE}$	0.141	$0.140^{+0.076}_{-0.074}$	$Y_P^{\text{BBN}}$	0.2625	$0.260^{+0.036}_{-0.037}$			

Best-fit  $\chi^2_{\text{eff}} = 12945.71$ ;  $\bar{\chi}^2_{\text{eff}} = 12979.99$ ;  $R - 1 = 0.02911$  $\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl.full.pp: 9.59 lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.75 plik\_dx11dr2\_HM\_v18.TTTEEE: 2433.48



## 16.11 base\_nnu\_yhe\_CamSpecHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02228	$0.02230^{+0.00074}_{-0.00070} \quad (-0.0\sigma)$	$\mathbf{c}_{217}$	0.99774	$0.9973^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$z_*$	1090.44	$1090.2^{+1.4}_{-1.4} \quad (-0.1\sigma)$
$\Omega_c h^2$	0.1171	$0.119^{+0.015}_{-0.014} \quad (-0.1\sigma)$	$\beta_1^1$	-0.02	$-0.1^{+2.0}_{-2.0}$	$r_*$	146.0	$144.9^{+8.7}_{-9.3} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	1.04182	$1.0413^{+0.0037}_{-0.0039} \quad (+0.1\sigma)$	$H_0$	66.8	$67.6^{+7.5}_{-6.6} \quad (-0.0\sigma)$	$100\theta_*$	1.04159	$1.0413^{+0.0027}_{-0.0027} \quad (+0.1\sigma)$
$\tau$	0.0784	$0.081^{+0.044}_{-0.041} \quad (-0.0\sigma)$	$\Omega_\Lambda$	0.6858	$0.688^{+0.041}_{-0.044} \quad (+0.0\sigma)$	$z_{\text{drag}}$	1060.05	$1059.9^{+2.6}_{-2.6} \quad (-0.0\sigma)$
$N_{\text{eff}}$	2.89	$3.0^{+1.1}_{-1.1} \quad (-0.1\sigma)$	$\Omega_m$	0.3142	$0.312^{+0.044}_{-0.041} \quad (-0.0\sigma)$	$r_{\text{drag}}$	148.7	$147.6^{+8.9}_{-9.6} \quad (+0.1\sigma)$
$Y_P$	0.263	$0.251^{+0.063}_{-0.064} \quad (+0.0\sigma)$	$\Omega_m h^2$	0.1401	$0.142^{+0.015}_{-0.015} \quad (-0.1\sigma)$	$k_D$	0.1389	$0.1402^{+0.0087}_{-0.0084} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	3.087	$3.092^{+0.096}_{-0.090} \quad (-0.1\sigma)$	$\Omega_m h^3$	0.0935	$0.096^{+0.020}_{-0.019} \quad (-0.1\sigma)$	$100\theta_D$	0.16137	$0.1612^{+0.0015}_{-0.0015} \quad (-0.0\sigma)$
$n_s$	0.9692	$0.970^{+0.030}_{-0.029} \quad (+0.1\sigma)$	$\sigma_8$	0.8261	$0.830^{+0.050}_{-0.045} \quad (-0.1\sigma)$	$z_{\text{eq}}$	3402	$3387^{+180}_{-170} \quad (-0.0\sigma)$
$y_{\text{cal}}$	1.00024	$1.0003^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4631	$0.463^{+0.027}_{-0.026} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	0.8136	$0.816^{+0.032}_{-0.031} \quad (+0.0\sigma)$
$A_{100}^{\text{PS}}$	255.9	$247^{+40}_{-50} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.6185	$0.620^{+0.028}_{-0.028} \quad (-0.2\sigma)$	$r_{\text{drag}}/D_V(0.57)$	0.07147	$0.0716^{+0.0023}_{-0.0021} \quad (+0.0\sigma)$
$A_{143}^{\text{PS}}$	38.3	$40^{+20}_{-20} \quad (-0.5\sigma)$	$\sigma_8/h^{0.5}$	1.0110	$1.011^{+0.040}_{-0.040} \quad (-0.1\sigma)$	$H(0.57)$	92.1	$93.0^{+7.5}_{-7.1} \quad (-0.1\sigma)$
$A_{217}^{\text{PS}}$	94.7	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	2.486	$2.487^{+0.096}_{-0.096} \quad (-0.2\sigma)$	$D_A(0.57)$	1403	$1391^{+120}_{-120} \quad (+0.1\sigma)$
$A_{217}^{\text{CIB}}$	47.4	$46^{+10}_{-10} \quad (-2.6\sigma)$	$z_{\text{re}}$	10.05	$10.1^{+3.7}_{-3.9} \quad (-0.0\sigma)$	$F_{\text{AP}}(0.57)$	0.6767	$0.676^{+0.011}_{-0.011} \quad (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	2.08	$< 6.65 \quad (-0.9\sigma)$	$10^9 A_s$	2.190	$2.21^{+0.21}_{-0.21} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	0.4810	$0.483^{+0.023}_{-0.022} \quad (-0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	0.404	$0.52^{+0.23}_{-0.20}$	$10^9 A_s e^{-2\tau}$	1.872	$1.874^{+0.050}_{-0.051} \quad (-0.3\sigma)$	$\sigma_8(0.57)$	0.6139	$0.618^{+0.044}_{-0.043} \quad (-0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.07	—	$D_{40}$	1223.8	$1225^{+43}_{-42} \quad (-0.3\sigma)$	$f_{2000}^{143}$	31.0	$29^{+7}_{-7} \quad (-0.3\sigma)$
$A^{\text{kSZ}}$	7.1	—	$D_{220}$	5696	$5696^{+82}_{-81} \quad (-0.5\sigma)$	$f_{2000}^{217}$	108.1	$106.9^{+5.1}_{-5.2} \quad (+0.1\sigma)$
$A_{100}^{\text{dust}}$	0.994	$0.99^{+0.38}_{-0.38}$	$D_{810}$	2529.6	$2531^{+28}_{-28} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	33.2	$32^{+6}_{-6} \quad (-0.3\sigma)$
$A_{143}^{\text{dust}}$	1.017	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	812.3	$814^{+11}_{-11} \quad (-0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	10495.4	$10496.8 \quad (\nu: 3.8) \quad (-0.2\sigma)$
$A_{217}^{\text{dust}}$	1.231	$1.21^{+0.23}_{-0.23}$	$n_{\text{s},0.002}$	0.9692	$0.970^{+0.030}_{-0.029} \quad (+0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	8044.8	$8061.5 \quad (\nu: 19.9)$
$A_{143 \times 217}^{\text{dust}}$	0.956	$0.98^{+0.35}_{-0.35}$	$Y_P$	0.263	$0.251^{+0.063}_{-0.064} \quad (+0.0\sigma)$	$\chi_{\text{prior}}^2$	3.9	$8.4 \quad (\nu: 6.1) \quad (+0.3\sigma)$
$c_{100}$	0.99660	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	Age/Gyr	13.93	$13.82^{+0.97}_{-1.0} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	18540.2	$18558.3 \quad (\nu: 18.8) \quad (+1239.4\sigma)$

Best-fit  $\chi_{\text{eff}}^2 = 18544.12$ ;  $\Delta\chi_{\text{eff}}^2 = 7282.27$ ;  $\bar{\chi}_{\text{eff}}^2 = 18566.69$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7282.81$ ;  $R - 1 = 0.01036$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.35 ( $\Delta$  -1.03) CamSpec like\_v9.10CMH\_unified: 8044.85

## 16.12 base\_nnu\_yhe\_CamSpecHM\_TT\_lowTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02234^{+0.00051}_{-0.00051} \quad (-0.0\sigma)$	$H_0$	$67.9^{+4.5}_{-4.4} \quad (-0.1\sigma)$	$r_{\text{drag}}$	$147.3^{+7.5}_{-8.0} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.119^{+0.014}_{-0.014} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.691^{+0.018}_{-0.018} \quad (-0.0\sigma)$	$k_D$	$0.1404^{+0.0075}_{-0.0074} \quad (-0.1\sigma)$
$100\theta_{\text{MC}}$	$1.0412^{+0.0035}_{-0.0037} \quad (+0.1\sigma)$	$\Omega_m$	$0.309^{+0.018}_{-0.018} \quad (+0.0\sigma)$	$100\theta_D$	$0.1612^{+0.0015}_{-0.0014} \quad (-0.1\sigma)$
$\tau$	$0.082^{+0.037}_{-0.036} \quad (-0.0\sigma)$	$\Omega_m h^2$	$0.142^{+0.014}_{-0.014} \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3376^{+90}_{-90} \quad (+0.0\sigma)$
$N_{\text{eff}}$	$3.07^{+0.88}_{-0.87} \quad (-0.1\sigma)$	$\Omega_m h^3$	$0.097^{+0.016}_{-0.015} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.818^{+0.015}_{-0.015} \quad (-0.0\sigma)$
$Y_P$	$0.251^{+0.058}_{-0.063} \quad (+0.0\sigma)$	$\sigma_8$	$0.832^{+0.041}_{-0.040} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07175^{+0.00095}_{-0.00092} \quad (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.096^{+0.076}_{-0.076} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.462^{+0.021}_{-0.022} \quad (-0.1\sigma)$	$H(0.57)$	$93.3^{+5.3}_{-5.2} \quad (-0.1\sigma)$
$n_s$	$0.972^{+0.018}_{-0.018} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.620^{+0.028}_{-0.028} \quad (-0.1\sigma)$	$D_A(0.57)$	$1384^{+80}_{-83} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0048}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$1.009^{+0.039}_{-0.038} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6753^{+0.0046}_{-0.0045} \quad (+0.0\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-50} \quad (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.483^{+0.088}_{-0.087} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.483^{+0.022}_{-0.022} \quad (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$z_{\text{re}}$	$10.3^{+3.2}_{-3.5} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.620^{+0.032}_{-0.032} \quad (-0.1\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s$	$2.21^{+0.17}_{-0.16} \quad (-0.1\sigma)$	$f_{2000}^{143}$	$29^{+7}_{-7} \quad (-0.3\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.048}_{-0.048} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$106.9^{+5.1}_{-5.2} \quad (+0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.58 \quad (-1.0\sigma)$	$D_{40}$	$1223^{+33}_{-33} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+6}_{-6} \quad (-0.3\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.20}$	$D_{220}$	$5697^{+80}_{-80} \quad (-0.5\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.3 \quad (\nu: 3.2) \quad (-0.2\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2531^{+28}_{-28} \quad (-0.3\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.3 \quad (\nu: 19.4)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$814^{+10}_{-10} \quad (-0.0\sigma)$	$\chi_{6\text{DF}}^2$	$0.065 \quad (\nu: 0.0) \quad (+0.0\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.37}$	$n_{s,0.002}$	$0.972^{+0.018}_{-0.018} \quad (+0.1\sigma)$	$\chi_{\text{MGS}}^2$	$1.47 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.36}$	$Y_P$	$0.251^{+0.058}_{-0.063} \quad (+0.0\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.98 \quad (\nu: 0.3) \quad (+0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$\text{Age}/\text{Gyr}$	$13.78^{+0.72}_{-0.75} \quad (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.68 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$z_*$	$1090.1^{+1.4}_{-1.3} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.5 \quad (\nu: 5.9) \quad (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0020}_{-0.0019} \quad (-1.5\sigma)$	$r_*$	$144.6^{+7.4}_{-7.8} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18557.6 \quad (\nu: 18.5) \quad (+1272.2\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$100\theta_*$	$1.0412^{+0.0025}_{-0.0025} \quad (+0.1\sigma)$	$\chi_{\text{BAO}}^2$	$5.2 \quad (\nu: 0.7) \quad (+0.0\sigma)$
$\beta_1^1$	$0.0^{+2.0}_{-2.0}$	$z_{\text{drag}}$	$1060.0^{+2.3}_{-2.2} \quad (-0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18571.22; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.88; R - 1 = 0.01204$$

### 16.13 base\_nnu\_yhe\_CamSpecHM\_TT\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02241^{+0.00065}_{-0.00063} \quad (-0.0\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.0408^{+0.0022}_{-0.0022} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.122^{+0.013}_{-0.013} \quad (-0.1\sigma)$	$H_0$	$69.2^{+5.1}_{-4.9} \quad (-0.0\sigma)$	$z_{\text{drag}}$	$1060.2^{+2.6}_{-2.4} \quad (-0.1\sigma)$
$100\theta_{\text{MC}}$	$1.0407^{+0.0033}_{-0.0033} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.697^{+0.030}_{-0.033} \quad (+0.1\sigma)$	$r_{\text{drag}}$	$145.7^{+6.9}_{-7.0} \quad (+0.1\sigma)$
$\tau$	$0.085^{+0.043}_{-0.040} \quad (-0.0\sigma)$	$\Omega_m$	$0.303^{+0.033}_{-0.030} \quad (-0.1\sigma)$	$k_D$	$0.1419^{+0.0069}_{-0.0064} \quad (-0.1\sigma)$
$N_{\text{eff}}$	$3.26^{+0.83}_{-0.83} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.145^{+0.013}_{-0.013} \quad (-0.1\sigma)$	$100\theta_D$	$0.1612^{+0.0015}_{-0.0015} \quad (-0.1\sigma)$
$Y_P$	$0.243^{+0.056}_{-0.060} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.100^{+0.015}_{-0.015} \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3348^{+130}_{-120} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.105^{+0.088}_{-0.083} \quad (-0.1\sigma)$	$\sigma_8$	$0.838^{+0.042}_{-0.041} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.823^{+0.023}_{-0.023} \quad (+0.1\sigma)$
$n_s$	$0.976^{+0.025}_{-0.024} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.461^{+0.026}_{-0.025} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0721^{+0.0018}_{-0.0017} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0048} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.622^{+0.028}_{-0.028} \quad (-0.2\sigma)$	$H(0.57)$	$94.6^{+5.3}_{-5.0} \quad (-0.0\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-50} \quad (-0.5\sigma)$	$\sigma_8/h^{0.5}$	$1.008^{+0.040}_{-0.039} \quad (-0.1\sigma)$	$D_A(0.57)$	$1362^{+87}_{-83} \quad (+0.0\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.477^{+0.094}_{-0.091} \quad (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6738^{+0.0084}_{-0.0079} \quad (-0.1\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$10.5^{+3.6}_{-3.7} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.485^{+0.022}_{-0.021} \quad (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s$	$2.23^{+0.20}_{-0.19} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.626^{+0.035}_{-0.034} \quad (-0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.60 \quad (-0.9\sigma)$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.043}_{-0.044} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+7}_{-7} \quad (-0.4\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.22}_{-0.21}$	$D_{40}$	$1220^{+40}_{-39} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.8^{+5.2}_{-5.2} \quad (+0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5700^{+81}_{-81} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+6}_{-6} \quad (-0.3\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2532^{+28}_{-28} \quad (-0.3\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.4 \quad (\nu: 3.7) \quad (-0.2\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{1420}$	$814^{+10}_{-11} \quad (-0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.8 \quad (\nu: 20.3)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.35}$	$n_{s,0.002}$	$0.976^{+0.025}_{-0.024} \quad (+0.1\sigma)$	$\chi_{\text{H070p6}}^2$	$0.8 \quad (\nu: 0.5) \quad (+0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$Y_P$	$0.243^{+0.056}_{-0.060} \quad (-0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.1) \quad (+0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$\text{Age/Gyr}$	$13.60^{+0.71}_{-0.70} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18558.2 \quad (\nu: 19.0) \quad (+1261.0\sigma)$
$c_{100}$	$0.9968^{+0.0020}_{-0.0019} \quad (-1.4\sigma)$	$z_*$	$1090.0^{+1.4}_{-1.3} \quad (-0.1\sigma)$		
$c_{217}$	$0.9973^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$r_*$	$143.0^{+6.8}_{-6.8} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18567.40; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.96; R - 1 = 0.01141$$

# 16.14 base\_nnu\_yhe\_CamSpecHM\_TT\_lowTEB\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00050}_{-0.00050} \quad (-0.0\sigma)$	$\Omega_\Lambda$	$0.694^{+0.016}_{-0.016} \quad (+0.0\sigma)$	$100\theta_D$	$0.1612^{+0.0015}_{-0.0014} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.122^{+0.013}_{-0.012} \quad (-0.1\sigma)$	$\Omega_m$	$0.306^{+0.016}_{-0.016} \quad (-0.0\sigma)$	$z_{\text{eq}}$	$3359^{+77}_{-77} \quad (+0.0\sigma)$
$100\theta_{\text{MC}}$	$1.0407^{+0.0033}_{-0.0033} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.145^{+0.013}_{-0.012} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.821^{+0.013}_{-0.013} \quad (+0.0\sigma)$
$\tau$	$0.083^{+0.037}_{-0.036} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.0996^{+0.014}_{-0.014} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07189^{+0.00088}_{-0.00085} \quad (+0.0\sigma)$
$N_{\text{eff}}$	$3.23^{+0.77}_{-0.77} \quad (-0.1\sigma)$	$\sigma_8$	$0.837^{+0.038}_{-0.038} \quad (-0.1\sigma)$	$H(0.57)$	$94.3^{+4.6}_{-4.3} \quad (-0.1\sigma)$
$Y_P$	$0.243^{+0.055}_{-0.059} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.463^{+0.021}_{-0.022} \quad (-0.1\sigma)$	$D_A(0.57)$	$1367^{+69}_{-68} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.100^{+0.075}_{-0.075} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.622^{+0.027}_{-0.028} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6745^{+0.0041}_{-0.0040} \quad (-0.0\sigma)$
$n_s$	$0.974^{+0.017}_{-0.017} \quad (+0.2\sigma)$	$\sigma_8/h^{0.5}$	$1.009^{+0.039}_{-0.038} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.485^{+0.021}_{-0.022} \quad (-0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0048}_{-0.0048} \quad (-0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.481^{+0.088}_{-0.085} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.624^{+0.030}_{-0.030} \quad (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-50} \quad (-0.5\sigma)$	$z_{\text{re}}$	$10.3^{+3.2}_{-3.4} \quad (-0.0\sigma)$	$f_{2000}^{143}$	$29^{+7}_{-7} \quad (-0.3\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$10^9 A_s$	$2.22^{+0.17}_{-0.16} \quad (-0.1\sigma)$	$f_{2000}^{217}$	$106.8^{+5.1}_{-5.2} \quad (+0.1\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.043}_{-0.043} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+6}_{-6} \quad (-0.3\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$D_{40}$	$1222^{+33}_{-33} \quad (-0.4\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.2 \quad (\nu: 3.2) \quad (-0.2\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.58 \quad (-1.0\sigma)$	$D_{220}$	$5699^{+79}_{-80} \quad (-0.5\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.4 \quad (\nu: 19.3)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.21}$	$D_{810}$	$2532^{+28}_{-28} \quad (-0.3\sigma)$	$\chi_{\text{H070p6}}^2$	$0.61 \quad (\nu: 0.3) \quad (+0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{1420}$	$814^{+10}_{-10} \quad (-0.0\sigma)$	$\chi_{\text{JLA}}^2$	$706.66 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A^{\text{kSZ}}$	—	$n_{s,0.002}$	$0.974^{+0.017}_{-0.017} \quad (+0.2\sigma)$	$\chi_{6\text{DF}}^2$	$0.046 \quad (\nu: 0.0) \quad (+0.0\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.37}$	$Y_P$	$0.243^{+0.055}_{-0.059} \quad (+0.0\sigma)$	$\chi_{\text{MGS}}^2$	$1.66 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$\text{Age/Gyr}$	$13.64^{+0.62}_{-0.63} \quad (+0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.92 \quad (\nu: 0.3) \quad (+0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$z_*$	$1090.1^{+1.3}_{-1.3} \quad (-0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.49 \quad (\nu: 0.1) \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$r_*$	$143.2^{+6.5}_{-6.5} \quad (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.5 \quad (\nu: 5.9) \quad (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0020}_{-0.0019} \quad (-1.5\sigma)$	$100\theta_*$	$1.0408^{+0.0022}_{-0.0022} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18557.6 \quad (\nu: 18.3) \quad (+1277.0\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$z_{\text{drag}}$	$1060.1^{+2.2}_{-2.2} \quad (-0.0\sigma)$	$\chi_{\text{BAO}}^2$	$5.1 \quad (\nu: 0.6) \quad (+0.0\sigma)$
$\beta_1^1$	$0.0^{+2.0}_{-2.0}$	$r_{\text{drag}}$	$145.9^{+6.6}_{-6.6} \quad (+0.1\sigma)$		
$H_0$	$68.8^{+3.8}_{-3.6} \quad (-0.1\sigma)$	$k_D$	$0.1417^{+0.0067}_{-0.0062} \quad (-0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 19278.44; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.93; R - 1 = 0.01439$$

### 16.15 base\_nnu\_yhe\_CamSpecHM\_TT\_lowTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00072}_{-0.00068} \quad (-0.0\sigma)$	$\beta_1^1$	$0.0^{+2.0}_{-1.9}$	$100\theta_*$	$1.0413^{+0.0026}_{-0.0025} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.119^{+0.014}_{-0.014} \quad (-0.1\sigma)$	$H_0$	$68.3^{+6.8}_{-6.5} \quad (-0.1\sigma)$	$z_{\text{drag}}$	$1059.8^{+2.5}_{-2.5} \quad (-0.1\sigma)$
$100\theta_{\text{MC}}$	$1.0412^{+0.0036}_{-0.0037} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.695^{+0.037}_{-0.039} \quad (-0.0\sigma)$	$r_{\text{drag}}$	$147.5^{+8.4}_{-8.8} \quad (+0.1\sigma)$
$\tau$	$0.071^{+0.039}_{-0.036} \quad (+0.1\sigma)$	$\Omega_m$	$0.305^{+0.039}_{-0.037} \quad (+0.0\sigma)$	$k_D$	$0.1404^{+0.0082}_{-0.0079} \quad (-0.1\sigma)$
$N_{\text{eff}}$	$3.09^{+1.0}_{-0.99} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.142^{+0.014}_{-0.014} \quad (-0.1\sigma)$	$100\theta_D$	$0.1611^{+0.0015}_{-0.0015} \quad (-0.1\sigma)$
$Y_P$	$0.247^{+0.057}_{-0.063} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.097^{+0.019}_{-0.018} \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3357^{+160}_{-150} \quad (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.070^{+0.083}_{-0.079} \quad (-0.0\sigma)$	$\sigma_8$	$0.819^{+0.042}_{-0.040} \quad (-0.0\sigma)$	$100\theta_{\text{eq}}$	$0.822^{+0.030}_{-0.028} \quad (-0.0\sigma)$
$n_s$	$0.972^{+0.028}_{-0.029} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.018}_{-0.017} \quad (+0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0720^{+0.0021}_{-0.0021} \quad (-0.0\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0048}_{-0.0048} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.020}_{-0.019} \quad (-0.0\sigma)$	$H(0.57)$	$93.4^{+6.9}_{-6.6} \quad (-0.1\sigma)$
$A_{100}^{\text{PS}}$	$248^{+40}_{-50} \quad (-0.5\sigma)$	$\sigma_8/h^{0.5}$	$0.992^{+0.023}_{-0.023} \quad (+0.1\sigma)$	$D_A(0.57)$	$1380^{+110}_{-110} \quad (+0.1\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.444^{+0.058}_{-0.057} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6743^{+0.0097}_{-0.0097} \quad (+0.0\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$9.2^{+3.3}_{-3.6} \quad (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.474^{+0.017}_{-0.016} \quad (-0.0\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s$	$2.16^{+0.18}_{-0.18} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.611^{+0.039}_{-0.039} \quad (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.58 \quad (-0.9\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.047}_{-0.048} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$30^{+7}_{-7} \quad (-0.4\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{40}$	$1216^{+39}_{-39} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$106.9^{+5.2}_{-5.3} \quad (+0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5696^{+81}_{-83} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+6}_{-6} \quad (-0.3\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2529^{+27}_{-28} \quad (-0.3\sigma)$	$\chi_{\text{lensing}}^2$	$9.9 \quad (\nu: 1.1) \quad (-0.1\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.37}$	$D_{1420}$	$814^{+11}_{-10} \quad (-0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.2 \quad (\nu: 1.7) \quad (-0.2\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.36}$	$n_{s,0.002}$	$0.972^{+0.028}_{-0.029} \quad (+0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8063.1 \quad (\nu: 18.8)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$Y_P$	$0.247^{+0.057}_{-0.063} \quad (-0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.0) \quad (+0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.34}$	Age/Gyr	$13.77^{+0.90}_{-0.92} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18568.2 \quad (\nu: 18.9) \quad (+1244.6\sigma)$
$c_{100}$	$0.9967^{+0.0020}_{-0.0019} \quad (-1.4\sigma)$	$z_*$	$1090.0^{+1.4}_{-1.4} \quad (-0.1\sigma)$		
$c_{217}$	$0.9973^{+0.0035}_{-0.0034} \quad (+0.9\sigma)$	$r_*$	$144.8^{+8.1}_{-8.5} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18576.67; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.25; R - 1 = 0.01746$$

# 16.16 base\_nnu\_yhe\_CamSpecHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022229	$0.02223^{+0.00048}_{-0.00047}$ $(+0.1\sigma)$	$c_{TE}$	1.0047	$1.0044^{+0.0093}_{-0.0092}$	$z_*$	1090.05	$1089.9^{+1.1}_{-1.1}$ $(-0.7\sigma)$
$\Omega_c h^2$	0.1129	$0.1135^{+0.0092}_{-0.0083}$ $(-0.4\sigma)$	$c_{EE}$	1.0017	$1.001^{+0.011}_{-0.011}$	$r_*$	148.6	$148.3^{+5.4}_{-5.5}$ $(+0.4\sigma)$
$100\theta_{MC}$	1.04246	$1.0422^{+0.0026}_{-0.0025}$ $(+0.2\sigma)$	$\beta_1^1$	-0.13	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	1.04229	$1.0422^{+0.0019}_{-0.0019}$ $(+0.3\sigma)$
$\tau$	0.0752	$0.075^{+0.035}_{-0.035}$ $(-0.3\sigma)$	$H_0$	65.20	$65.4^{+3.7}_{-3.7}$ $(-0.2\sigma)$	$z_{drag}$	1059.59	$1059.5^{+1.9}_{-1.9}$ $(-0.2\sigma)$
$N_{eff}$	2.62	$2.66^{+0.59}_{-0.58}$ $(-0.3\sigma)$	$\Omega_\Lambda$	0.6806	$0.681^{+0.023}_{-0.024}$ $(+0.1\sigma)$	$r_{drag}$	151.4	$151.1^{+5.5}_{-5.7}$ $(+0.4\sigma)$
$Y_P$	0.2643	$0.259^{+0.039}_{-0.041}$ $(-0.1\sigma)$	$\Omega_m$	0.3194	$0.319^{+0.024}_{-0.023}$ $(-0.1\sigma)$	$k_D$	0.13704	$0.1374^{+0.0050}_{-0.0047}$ $(-0.3\sigma)$
$\ln(10^{10} A_s)$	3.070	$3.070^{+0.074}_{-0.074}$ $(-0.5\sigma)$	$\Omega_m h^2$	0.1358	$0.1364^{+0.0091}_{-0.0089}$ $(-0.4\sigma)$	$100\theta_D$	0.16081	$0.1607^{+0.0012}_{-0.0013}$ $(-0.7\sigma)$
$n_s$	0.9616	$0.961^{+0.020}_{-0.019}$ $(-0.1\sigma)$	$\Omega_m h^3$	0.0885	$0.089^{+0.010}_{-0.010}$ $(-0.3\sigma)$	$z_{eq}$	3427	$3423^{+89}_{-89}$ $(-0.1\sigma)$
$y_{cal}$	1.00030	$1.0003^{+0.0048}_{-0.0048}$ $(-0.1\sigma)$	$\sigma_8$	0.8114	$0.812^{+0.035}_{-0.034}$ $(-0.6\sigma)$	$100\theta_{eq}$	0.8094	$0.810^{+0.016}_{-0.016}$ $(+0.1\sigma)$
$A_{100}^{PS}$	248.2	$242^{+40}_{-50}$ $(-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4586	$0.459^{+0.019}_{-0.018}$ $(-0.7\sigma)$	$r_{drag}/D_V(0.57)$	0.07123	$0.0712^{+0.0012}_{-0.0011}$ $(+0.1\sigma)$
$A_{143}^{PS}$	35.5	$38^{+20}_{-20}$ $(-0.8\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.6100	$0.610^{+0.023}_{-0.023}$ $(-0.7\sigma)$	$H(0.57)$	90.28	$90.5^{+3.9}_{-3.9}$ $(-0.3\sigma)$
$A_{217}^{PS}$	97.2	$100^{+30}_{-30}$ $(+0.1\sigma)$	$\sigma_8/h^{0.5}$	1.0049	$1.005^{+0.033}_{-0.033}$ $(-0.6\sigma)$	$D_A(0.57)$	1434	$1431^{+68}_{-70}$ $(+0.2\sigma)$
$A_{217}^{CIB}$	46.9	$45^{+10}_{-10}$ $(-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	2.486	$2.487^{+0.078}_{-0.077}$ $(-0.6\sigma)$	$F_{AP}(0.57)$	0.6780	$0.6780^{+0.0058}_{-0.0058}$ $(-0.1\sigma)$
$A_{143}^{tSZ}$	3.31	$< 6.89$ $(-1.0\sigma)$	$z_{re}$	9.67	$9.6^{+3.3}_{-3.4}$ $(-0.3\sigma)$	$f\sigma_8(0.57)$	0.4738	$0.474^{+0.018}_{-0.018}$ $(-0.7\sigma)$
$r_{143 \times 217}^{PS}$	0.419	$0.52^{+0.23}_{-0.21}$	$10^9 A_s$	2.154	$2.16^{+0.16}_{-0.15}$ $(-0.5\sigma)$	$\sigma_8(0.57)$	0.6018	$0.602^{+0.029}_{-0.028}$ $(-0.5\sigma)$
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8532	$1.853^{+0.040}_{-0.039}$ $(-0.8\sigma)$	$f_{2000}^{143}$	29.2	$28^{+7}_{-7}$ $(-0.6\sigma)$
$A^{kSZ}$	4.9	—	$D_{40}$	1231.1	$1233^{+33}_{-33}$ $(-0.5\sigma)$	$f_{2000}^{217}$	106.63	$105.9^{+4.7}_{-4.7}$ $(-0.1\sigma)$
$A_{100}^{dust}$	0.976	$0.98^{+0.38}_{-0.38}$	$D_{220}$	5706	$5706^{+77}_{-74}$ $(-0.5\sigma)$	$f_{2000}^{143 \times 217}$	31.7	$31^{+5}_{-5}$ $(-0.7\sigma)$
$A_{143}^{dust}$	1.033	$1.02^{+0.36}_{-0.36}$	$D_{810}$	2527.4	$2528^{+26}_{-26}$ $(-0.5\sigma)$	$\chi_{lowTEB}^2$	10496.06	$10497.0 (\nu: 2.5)$ $(-0.4\sigma)$
$A_{217}^{dust}$	1.224	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	814.4	$815.3^{+9.5}_{-9.6}$ $(+0.1\sigma)$	$\chi_{CamSpec}^2$	12933.3	$12951.4 (\nu: 20.0)$
$A_{143 \times 217}^{dust}$	0.967	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	0.9616	$0.961^{+0.020}_{-0.019}$ $(-0.1\sigma)$	$\chi_{prior}^2$	3.9	$9.1 (\nu: 6.3)$ $(-1.8\sigma)$
$c_{100}$	0.99661	$0.9968^{+0.0019}_{-0.0019}$ $(-1.8\sigma)$	$Y_P$	0.2643	$0.259^{+0.039}_{-0.041}$ $(-0.1\sigma)$	$\chi_{CMB}^2$	23429.4	$23448.5 (\nu: 19.6)$ $(+1522.5\sigma)$
$c_{217}$	0.99728	$0.9970^{+0.0035}_{-0.0035}$ $(+0.7\sigma)$	Age/Gyr	14.20	$14.17^{+0.56}_{-0.57}$ $(+0.3\sigma)$			

Best-fit  $\chi_{eff}^2 = 23433.29$ ;  $\Delta\chi_{eff}^2 = 10499.00$ ;  $\bar{\chi}_{eff}^2 = 23457.59$ ;  $\Delta\bar{\chi}_{eff}^2 = 10489.36$ ;  $R - 1 = 0.00866$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.06 ( $\Delta$  -1.23) CamSpec like\_v9.10CMH\_unified: 12933.32

# 16.17 base\_nnu\_yhe\_CamSpecHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00038}_{-0.00039} \quad (-0.0\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_{\text{drag}}$	$150.5^{+5.3}_{-5.3} \quad (+0.4\sigma)$
$\Omega_c h^2$	$0.1138^{+0.0092}_{-0.0083} \quad (-0.5\sigma)$	$H_0$	$66.1^{+3.1}_{-2.9} \quad (-0.3\sigma)$	$k_D$	$0.1378^{+0.0049}_{-0.0045} \quad (-0.3\sigma)$
$100\theta_{\text{MC}}$	$1.0422^{+0.0026}_{-0.0026} \quad (+0.2\sigma)$	$\Omega_\Lambda$	$0.687^{+0.015}_{-0.015} \quad (-0.0\sigma)$	$100\theta_D$	$0.1608^{+0.0012}_{-0.0012} \quad (-0.6\sigma)$
$\tau$	$0.080^{+0.033}_{-0.033} \quad (-0.3\sigma)$	$\Omega_m$	$0.313^{+0.015}_{-0.015} \quad (+0.0\sigma)$	$z_{\text{eq}}$	$3402^{+65}_{-64} \quad (+0.1\sigma)$
$N_{\text{eff}}$	$2.72^{+0.57}_{-0.52} \quad (-0.4\sigma)$	$\Omega_m h^2$	$0.1368^{+0.0092}_{-0.0084} \quad (-0.5\sigma)$	$100\theta_{\text{eq}}$	$0.814^{+0.011}_{-0.011} \quad (-0.0\sigma)$
$Y_P$	$0.260^{+0.039}_{-0.041} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.0904^{+0.0099}_{-0.0096} \quad (-0.4\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07155^{+0.00078}_{-0.00075} \quad (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.080^{+0.066}_{-0.069} \quad (-0.6\sigma)$	$\sigma_8$	$0.816^{+0.033}_{-0.033} \quad (-0.7\sigma)$	$H(0.57)$	$91.1^{+3.5}_{-3.3} \quad (-0.4\sigma)$
$n_s$	$0.965^{+0.015}_{-0.015} \quad (-0.2\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.017}_{-0.017} \quad (-0.7\sigma)$	$D_A(0.57)$	$1419^{+58}_{-58} \quad (+0.4\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0048}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.610^{+0.023}_{-0.023} \quad (-0.7\sigma)$	$F_{\text{AP}}(0.57)$	$0.6765^{+0.0038}_{-0.0037} \quad (+0.0\sigma)$
$A_{100}^{\text{PS}}$	$243^{+40}_{-50} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.004^{+0.034}_{-0.033} \quad (-0.6\sigma)$	$f\sigma_8(0.57)$	$0.475^{+0.018}_{-0.018} \quad (-0.7\sigma)$
$A_{143}^{\text{PS}}$	$38^{+20}_{-20} \quad (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.482^{+0.077}_{-0.077} \quad (-0.6\sigma)$	$\sigma_8(0.57)$	$0.607^{+0.026}_{-0.026} \quad (-0.7\sigma)$
$A_{217}^{\text{PS}}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$9.99^{+3.0}_{-3.1} \quad (-0.4\sigma)$	$f_{2000}^{143}$	$28^{+7}_{-7} \quad (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.18^{+0.15}_{-0.15} \quad (-0.6\sigma)$	$f_{2000}^{217}$	$106.0^{+4.6}_{-4.7} \quad (-0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.92 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.856^{+0.040}_{-0.038} \quad (-0.8\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+5}_{-5} \quad (-0.6\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.22}$	$D_{40}$	$1228^{+31}_{-30} \quad (-0.5\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.6 \quad (\nu: 2.5) \quad (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5709^{+78}_{-75} \quad (-0.5\sigma)$	$\chi_{\text{CamSpec}}^2$	$12951.6 \quad (\nu: 20.2)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2528^{+26}_{-26} \quad (-0.5\sigma)$	$\chi_{6\text{DF}}^2$	$0.081 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.38}_{-0.38}$	$D_{1420}$	$815.2^{+9.4}_{-9.6} \quad (+0.1\sigma)$	$\chi_{\text{MGS}}^2$	$1.18 \quad (\nu: 0.1) \quad (+0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$n_{s,0.002}$	$0.965^{+0.015}_{-0.015} \quad (-0.2\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.92 \quad (\nu: 0.3) \quad (-0.1\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$Y_P$	$0.260^{+0.039}_{-0.041} \quad (-0.0\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.92 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.35}$	Age/Gyr	$14.10^{+0.51}_{-0.51} \quad (+0.4\sigma)$	$\chi_{\text{prior}}^2$	$9.2 \quad (\nu: 6.6) \quad (-1.9\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.9^{+1.1}_{-1.1} \quad (-0.6\sigma)$	$\chi_{\text{CMB}}^2$	$23448.2 \quad (\nu: 19.4) \quad (+1093.1\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0035} \quad (+0.7\sigma)$	$r_*$	$147.8^{+5.2}_{-5.2} \quad (+0.4\sigma)$	$\chi_{\text{BAO}}^2$	$5.1 \quad (\nu: 0.6) \quad (-0.1\sigma)$
$c_{TE}$	$1.0046^{+0.0094}_{-0.0092}$	$100\theta_*$	$1.0421^{+0.0018}_{-0.0018} \quad (+0.4\sigma)$		
$c_{EE}$	$1.002^{+0.011}_{-0.010}$	$z_{\text{drag}}$	$1059.7^{+1.7}_{-1.7} \quad (-0.3\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 23462.48; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.97; R - 1 = 0.01137$$

16.18 base\_nnu\_yhe\_CamSpecHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00047}_{-0.00044} \quad (+0.1\sigma)$	$c_{TE}$	$1.0045^{+0.0095}_{-0.0092}$	$z_*$	$1089.9^{+1.1}_{-1.0} \quad (-0.7\sigma)$
$\Omega_c h^2$	$0.1158^{+0.0089}_{-0.0080} \quad (-0.4\sigma)$	$c_{EE}$	$1.001^{+0.011}_{-0.011}$	$r_*$	$146.7^{+4.9}_{-5.1} \quad (+0.4\sigma)$
$100\theta_{MC}$	$1.0417^{+0.0024}_{-0.0025} \quad (+0.2\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	$1.0417^{+0.0017}_{-0.0017} \quad (+0.3\sigma)$
$\tau$	$0.079^{+0.035}_{-0.035} \quad (-0.3\sigma)$	$H_0$	$66.6^{+3.5}_{-3.2} \quad (-0.2\sigma)$	$z_{drag}$	$1059.8^{+2.0}_{-1.9} \quad (-0.2\sigma)$
$N_{eff}$	$2.84^{+0.57}_{-0.56} \quad (-0.3\sigma)$	$\Omega_\Lambda$	$0.687^{+0.021}_{-0.021} \quad (+0.1\sigma)$	$r_{drag}$	$149.4^{+5.1}_{-5.3} \quad (+0.4\sigma)$
$Y_P$	$0.254^{+0.039}_{-0.041} \quad (-0.1\sigma)$	$\Omega_m$	$0.313^{+0.021}_{-0.021} \quad (-0.1\sigma)$	$k_D$	$0.1388^{+0.0049}_{-0.0044} \quad (-0.3\sigma)$
$\ln(10^{10} A_s)$	$3.082^{+0.073}_{-0.073} \quad (-0.5\sigma)$	$\Omega_m h^2$	$0.1388^{+0.0089}_{-0.0086} \quad (-0.4\sigma)$	$100\theta_D$	$0.1608^{+0.0013}_{-0.0012} \quad (-0.6\sigma)$
$n_s$	$0.966^{+0.019}_{-0.018} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.0925^{+0.010}_{-0.0099} \quad (-0.4\sigma)$	$z_{eq}$	$3396^{+80}_{-84} \quad (-0.1\sigma)$
$y_{cal}$	$1.0003^{+0.0048}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8$	$0.820^{+0.034}_{-0.033} \quad (-0.6\sigma)$	$100\theta_{eq}$	$0.815^{+0.015}_{-0.014} \quad (+0.1\sigma)$
$A_{100}^{PS}$	$243^{+50}_{-50} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.458^{+0.019}_{-0.018} \quad (-0.7\sigma)$	$r_{drag}/D_V(0.57)$	$0.0715^{+0.0011}_{-0.0011} \quad (+0.1\sigma)$
$A_{143}^{PS}$	$38^{+20}_{-20} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.613^{+0.023}_{-0.022} \quad (-0.7\sigma)$	$H(0.57)$	$91.8^{+3.6}_{-3.6} \quad (-0.3\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.004^{+0.034}_{-0.033} \quad (-0.6\sigma)$	$D_A(0.57)$	$1408^{+61}_{-63} \quad (+0.3\sigma)$
$A_{217}^{CIB}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.482^{+0.078}_{-0.078} \quad (-0.6\sigma)$	$F_{AP}(0.57)$	$0.6764^{+0.0053}_{-0.0054} \quad (-0.1\sigma)$
$A_{143}^{tSZ}$	$< 6.92 \quad (-1.0\sigma)$	$z_{re}$	$9.9^{+3.3}_{-3.3} \quad (-0.3\sigma)$	$f\sigma_8(0.57)$	$0.477^{+0.018}_{-0.018} \quad (-0.7\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.22}$	$10^9 A_s$	$2.18^{+0.16}_{-0.15} \quad (-0.5\sigma)$	$\sigma_8(0.57)$	$0.610^{+0.029}_{-0.027} \quad (-0.6\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.863^{+0.039}_{-0.037} \quad (-0.8\sigma)$	$f_{2000}^{143}$	$28^{+7}_{-7} \quad (-0.5\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1229^{+33}_{-33} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.0^{+4.8}_{-4.7} \quad (-0.1\sigma)$
$A_{100}^{dust}$	$0.99^{+0.37}_{-0.38}$	$D_{220}$	$5710^{+77}_{-75} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+5}_{-5} \quad (-0.6\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2529^{+27}_{-26} \quad (-0.5\sigma)$	$\chi_{lowTEB}^2$	$10496.7 \quad (\nu: 2.5) \quad (-0.4\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	$815.2^{+9.4}_{-9.4} \quad (+0.1\sigma)$	$\chi_{CamSpec}^2$	$12952.3 \quad (\nu: 22.0)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.34}_{-0.35}$	$n_{s,0.002}$	$0.966^{+0.019}_{-0.018} \quad (-0.0\sigma)$	$\chi_{H070p6}^2$	$1.7 \quad (\nu: 0.8) \quad (+0.2\sigma)$
$c_{100}$	$0.9968^{+0.0020}_{-0.0019} \quad (-1.7\sigma)$	$Y_P$	$0.254^{+0.039}_{-0.041} \quad (-0.1\sigma)$	$\chi_{prior}^2$	$9.2 \quad (\nu: 6.6) \quad (-1.8\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0036} \quad (+0.7\sigma)$	$Age/Gyr$	$13.99^{+0.51}_{-0.52} \quad (+0.3\sigma)$	$\chi_{CMB}^2$	$23449.0 \quad (\nu: 21.2) \quad (+1112.4\sigma)$

$$\bar{\chi}_{eff}^2 = 23459.86; \Delta\bar{\chi}_{eff}^2 = 10489.58; R - 1 = 0.01120$$



16.19 base\_nnu\_yhe\_CamSpecHM\_TTTEEE\_lowTEB\_post\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00038}_{-0.00037} (+0.0\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_{\text{drag}}$	$149.2^{+4.9}_{-5.1} (+0.5\sigma)$
$\Omega_c h^2$	$0.1158^{+0.0088}_{-0.0080} (-0.5\sigma)$	$H_0$	$66.9^{+2.9}_{-2.7} (-0.4\sigma)$	$k_D$	$0.1389^{+0.0048}_{-0.0043} (-0.3\sigma)$
$100\theta_{\text{MC}}$	$1.0417^{+0.0024}_{-0.0025} (+0.2\sigma)$	$\Omega_\Lambda$	$0.690^{+0.014}_{-0.014} (+0.0\sigma)$	$100\theta_D$	$0.1608^{+0.0012}_{-0.0012} (-0.6\sigma)$
$\tau$	$0.081^{+0.033}_{-0.033} (-0.3\sigma)$	$\Omega_m$	$0.310^{+0.014}_{-0.014} (-0.0\sigma)$	$z_{\text{eq}}$	$3386^{+61}_{-61} (+0.1\sigma)$
$N_{\text{eff}}$	$2.86^{+0.55}_{-0.49} (-0.4\sigma)$	$\Omega_m h^2$	$0.1388^{+0.0088}_{-0.0086} (-0.5\sigma)$	$100\theta_{\text{eq}}$	$0.817^{+0.011}_{-0.010} (-0.0\sigma)$
$Y_P$	$0.255^{+0.039}_{-0.040} (-0.0\sigma)$	$\Omega_m h^3$	$0.0930^{+0.0095}_{-0.0093} (-0.4\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07170^{+0.00074}_{-0.00072} (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.086^{+0.068}_{-0.068} (-0.5\sigma)$	$\sigma_8$	$0.821^{+0.033}_{-0.032} (-0.7\sigma)$	$H(0.57)$	$92.0^{+3.4}_{-3.1} (-0.4\sigma)$
$n_s$	$0.968^{+0.015}_{-0.015} (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.017}_{-0.017} (-0.7\sigma)$	$D_A(0.57)$	$1403^{+53}_{-54} (+0.4\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0048}_{-0.0049} (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.613^{+0.023}_{-0.022} (-0.7\sigma)$	$F_{\text{AP}}(0.57)$	$0.6756^{+0.0035}_{-0.0036} (-0.0\sigma)$
$A_{100}^{\text{PS}}$	$244^{+50}_{-50} (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.004^{+0.034}_{-0.033} (-0.6\sigma)$	$f\sigma_8(0.57)$	$0.477^{+0.018}_{-0.017} (-0.7\sigma)$
$A_{143}^{\text{PS}}$	$38^{+20}_{-20} (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.479^{+0.076}_{-0.076} (-0.6\sigma)$	$\sigma_8(0.57)$	$0.611^{+0.026}_{-0.025} (-0.7\sigma)$
$A_{217}^{\text{PS}}$	$99^{+30}_{-30} (+0.1\sigma)$	$z_{\text{re}}$	$10.1^{+3.0}_{-3.1} (-0.4\sigma)$	$f_{2000}^{143}$	$28^{+7}_{-7} (-0.5\sigma)$
$A_{217}^{\text{CIB}}$	$45^{+10}_{-10} (-2.8\sigma)$	$10^9 A_s$	$2.19^{+0.15}_{-0.14} (-0.5\sigma)$	$f_{2000}^{217}$	$106.0^{+4.7}_{-4.7} (-0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.91 (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.863^{+0.038}_{-0.037} (-0.8\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+5}_{-5} (-0.6\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.22}$	$D_{40}$	$1226^{+30}_{-30} (-0.5\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.5 (\nu: 2.6) (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5711^{+76}_{-75} (-0.5\sigma)$	$\chi_{\text{CamSpec}}^2$	$12952.3 (\nu: 21.0)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2529^{+27}_{-26} (-0.5\sigma)$	$\chi_{\text{H070p6}}^2$	$1.39 (\nu: 0.4) (+0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.38}$	$D_{1420}$	$815.1^{+9.4}_{-9.5} (+0.1\sigma)$	$\chi_{\text{JLA}}^2$	$706.74 (\nu: 0.0) (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.36}$	$n_{s,0.002}$	$0.968^{+0.015}_{-0.015} (-0.1\sigma)$	$\chi_{6\text{DF}}^2$	$0.050 (\nu: 0.0) (-0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$Y_P$	$0.255^{+0.039}_{-0.040} (-0.0\sigma)$	$\chi_{\text{MGS}}^2$	$1.38 (\nu: 0.1) (+0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.34}_{-0.35}$	$\text{Age/Gyr}$	$13.96^{+0.46}_{-0.48} (+0.4\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.76 (\nu: 0.1) (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0020}_{-0.0019} (-1.8\sigma)$	$z_*$	$1089.9^{+1.1}_{-1.0} (-0.6\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.67 (\nu: 0.1) (-0.1\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0036} (+0.7\sigma)$	$r_*$	$146.5^{+4.8}_{-4.9} (+0.5\sigma)$	$\chi_{\text{prior}}^2$	$9.2 (\nu: 6.7) (-1.9\sigma)$
$c_{TE}$	$1.0045^{+0.0095}_{-0.0092}$	$100\theta_*$	$1.0417^{+0.0017}_{-0.0017} (+0.4\sigma)$	$\chi_{\text{CMB}}^2$	$23448.8 (\nu: 20.1) (+1525.9\sigma)$
$c_{EE}$	$1.002^{+0.011}_{-0.010}$	$z_{\text{drag}}$	$1059.9^{+1.7}_{-1.6} (-0.3\sigma)$	$\chi_{\text{BAO}}^2$	$4.87 (\nu: 0.3) (-0.1\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 24170.97; \Delta\bar{\chi}_{\text{eff}}^2 = 10489.47; R - 1 = 0.01445$$

## 16.20 base\_nnu\_yhe\_CamSpecHM\_TTTEEE\_lowTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02220^{+0.00048}_{-0.00047} \quad (+0.1\sigma)$	$c_{TE}$	$1.0052^{+0.0093}_{-0.0093}$	$z_*$	$1089.9^{+1.1}_{-1.0} \quad (-0.6\sigma)$
$\Omega_c h^2$	$0.1129^{+0.0089}_{-0.0080} \quad (-0.4\sigma)$	$c_{EE}$	$1.001^{+0.011}_{-0.011}$	$r_*$	$148.6^{+5.4}_{-5.5} \quad (+0.4\sigma)$
$100\theta_{MC}$	$1.0423^{+0.0025}_{-0.0025} \quad (+0.2\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.0423^{+0.0019}_{-0.0018} \quad (+0.3\sigma)$
$\tau$	$0.064^{+0.028}_{-0.028} \quad (+0.1\sigma)$	$H_0$	$65.3^{+3.7}_{-3.4} \quad (-0.2\sigma)$	$z_{drag}$	$1059.3^{+1.9}_{-1.9} \quad (-0.1\sigma)$
$N_{eff}$	$2.63^{+0.60}_{-0.53} \quad (-0.3\sigma)$	$\Omega_\Lambda$	$0.682^{+0.023}_{-0.023} \quad (+0.0\sigma)$	$r_{drag}$	$151.4^{+5.5}_{-5.6} \quad (+0.4\sigma)$
$Y_P$	$0.259^{+0.038}_{-0.039} \quad (-0.0\sigma)$	$\Omega_m$	$0.318^{+0.023}_{-0.023} \quad (-0.0\sigma)$	$k_D$	$0.1372^{+0.0050}_{-0.0047} \quad (-0.3\sigma)$
$\ln(10^{10} A_s)$	$3.044^{+0.059}_{-0.056} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1358^{+0.0090}_{-0.0082} \quad (-0.4\sigma)$	$100\theta_D$	$0.1606^{+0.0012}_{-0.0012} \quad (-0.6\sigma)$
$n_s$	$0.961^{+0.019}_{-0.018} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.0887^{+0.011}_{-0.0093} \quad (-0.3\sigma)$	$z_{eq}$	$3419^{+89}_{-86} \quad (+0.0\sigma)$
$y_{cal}$	$1.0001^{+0.0049}_{-0.0048} \quad (-0.1\sigma)$	$\sigma_8$	$0.800^{+0.028}_{-0.027} \quad (-0.3\sigma)$	$100\theta_{eq}$	$0.811^{+0.016}_{-0.016} \quad (+0.0\sigma)$
$A_{100}^{PS}$	$243^{+40}_{-50} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.013}_{-0.013} \quad (-0.4\sigma)$	$r_{drag}/D_V(0.57)$	$0.0713^{+0.0012}_{-0.0011} \quad (+0.1\sigma)$
$A_{143}^{PS}$	$38^{+20}_{-20} \quad (-0.8\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.601^{+0.016}_{-0.016} \quad (-0.5\sigma)$	$H(0.57)$	$90.4^{+3.9}_{-3.6} \quad (-0.3\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$0.990^{+0.021}_{-0.021} \quad (-0.3\sigma)$	$D_A(0.57)$	$1433^{+67}_{-68} \quad (+0.2\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.454^{+0.051}_{-0.051} \quad (-0.2\sigma)$	$F_{AP}(0.57)$	$0.6778^{+0.0058}_{-0.0058} \quad (-0.0\sigma)$
$A_{143}^{tSZ}$	$< 6.89 \quad (-0.9\sigma)$	$z_{re}$	$8.5^{+2.6}_{-2.9} \quad (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.467^{+0.013}_{-0.013} \quad (-0.4\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.22}$	$10^9 A_s$	$2.10^{+0.13}_{-0.12} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.594^{+0.025}_{-0.024} \quad (-0.3\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.849^{+0.040}_{-0.039} \quad (-0.7\sigma)$	$f_{2000}^{143}$	$28^{+7}_{-7} \quad (-0.6\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1227^{+32}_{-31} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.1^{+4.6}_{-4.7} \quad (-0.2\sigma)$
$A_{100}^{dust}$	$0.98^{+0.36}_{-0.38}$	$D_{220}$	$5702^{+77}_{-75} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+5}_{-5} \quad (-0.7\sigma)$
$A_{143}^{dust}$	$1.03^{+0.35}_{-0.36}$	$D_{810}$	$2526^{+27}_{-26} \quad (-0.5\sigma)$	$\chi_{lensing}^2$	$9.7 \quad (\nu: 1.0) \quad (-0.4\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.22}$	$D_{1420}$	$815^{+10}_{-9.7} \quad (+0.1\sigma)$	$\chi_{lowTEB}^2$	$10495.9 \quad (\nu: 1.4) \quad (-0.3\sigma)$
$A_{143 \times 217}^{dust}$	$0.99^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.961^{+0.019}_{-0.018} \quad (-0.0\sigma)$	$\chi_{CamSpec}^2$	$12952.6 \quad (\nu: 20.2)$
$c_{100}$	$0.9967^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.259^{+0.038}_{-0.039} \quad (-0.0\sigma)$	$\chi_{prior}^2$	$9.2 \quad (\nu: 6.5) \quad (-1.8\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0035} \quad (+0.7\sigma)$	$Age/Gyr$	$14.20^{+0.55}_{-0.56} \quad (+0.3\sigma)$	$\chi_{CMB}^2$	$23458.2 \quad (\nu: 20.6) \quad (+1462.1\sigma)$

$$\bar{\chi}_{eff}^2 = 23467.39; \Delta\bar{\chi}_{eff}^2 = 10487.40; R - 1 = 0.01179$$

## 17 nrun

### 17.1 base\_nrun\_plikHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02237	$0.02236^{+0.00054}_{-0.00052}$	$\Omega_m$	0.3128	$0.313^{+0.029}_{-0.027}$	$D_A/\text{Gpc}$	13.884	$13.883^{+0.092}_{-0.092}$
$\Omega_c h^2$	0.11956	$0.1196^{+0.0045}_{-0.0044}$	$\Omega_m h^2$	0.14257	$0.1426^{+0.0042}_{-0.0042}$	$z_{\text{drag}}$	1059.89	$1059.9^{+1.1}_{-1.1}$
$100\theta_{\text{MC}}$	1.04093	$1.04093^{+0.00094}_{-0.00096}$	$\Omega_m h^3$	0.09624	$0.0962^{+0.0011}_{-0.0010}$	$r_{\text{drag}}$	147.21	$147.2^{+1.0}_{-1.0}$
$\tau$	0.0872	$0.088^{+0.045}_{-0.042}$	$\sigma_8$	0.8354	$0.836^{+0.032}_{-0.031}$	$k_D$	0.14074	$0.1407^{+0.0011}_{-0.0011}$
$\ln(10^{10} A_s)$	3.110	$3.111^{+0.087}_{-0.082}$	$\sigma_8 \Omega_m^{0.5}$	0.4673	$0.468^{+0.027}_{-0.026}$	$100\theta_D$	0.16078	$0.16079^{+0.00062}_{-0.00062}$
$n_s$	0.9658	$0.965^{+0.013}_{-0.013}$	$\sigma_8 \Omega_m^{0.25}$	0.6248	$0.625^{+0.028}_{-0.027}$	$z_{\text{eq}}$	3392	$3393^{+100}_{-99}$
$dn_s/d \ln k$	-0.0071	$-0.008^{+0.016}_{-0.016}$	$\sigma_8/h^{0.5}$	1.0168	$1.017^{+0.041}_{-0.040}$	$k_{\text{eq}}$	0.010351	$0.01036^{+0.00031}_{-0.00030}$
$y_{\text{cal}}$	1.00034	$1.0004^{+0.0049}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.503	$2.505^{+0.093}_{-0.090}$	$100\theta_{\text{eq}}$	0.8152	$0.815^{+0.019}_{-0.019}$
$A_{217}^{\text{CIB}}$	67.8	$65^{+10}_{-10}$	$z_{\text{re}}$	10.76	$10.7^{+3.8}_{-3.8}$	$100\theta_{\text{s,eq}}$	0.4504	$0.4503^{+0.0098}_{-0.0097}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.241	$2.25^{+0.20}_{-0.19}$	$r_{\text{drag}}/D_V(0.57)$	0.07149	$0.0715^{+0.0015}_{-0.0015}$
$A_{143}^{\text{tSZ}}$	7.11	$4.9^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8829	$1.884^{+0.029}_{-0.028}$	$H(0.57)$	93.01	$93.01^{+0.93}_{-0.86}$
$A_{100}^{\text{PS}}$	255	$261^{+60}_{-60}$	$D_{40}$	1221.9	$1222^{+44}_{-41}$	$D_A(0.57)$	1388.6	$1389^{+27}_{-27}$
$A_{143}^{\text{PS}}$	39.9	$45^{+20}_{-20}$	$D_{220}$	5720	$5721^{+81}_{-79}$	$F_{\text{AP}}(0.57)$	0.6764	$0.6765^{+0.0071}_{-0.0068}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{810}$	2536.7	$2537^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4861	$0.486^{+0.020}_{-0.019}$
$A_{217}^{\text{PS}}$	97.1	$97^{+20}_{-20}$	$D_{1420}$	814.1	$813^{+10}_{-9.9}$	$\sigma_8(0.57)$	0.6212	$0.621^{+0.025}_{-0.024}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.12	$229.8^{+4.0}_{-3.8}$	$f_{2000}^{143}$	30.3	$31^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.42	$7.5^{+3.7}_{-3.7}$	$n_{\text{s},0.002}$	0.989	$0.992^{+0.054}_{-0.051}$	$f_{2000}^{143 \times 217}$	32.77	$33^{+4}_{-5}$
$A_{143}^{\text{dustTT}}$	9.08	$9.0^{+3.6}_{-3.6}$	$Y_{\text{P}}$	0.245391	$0.24539^{+0.00024}_{-0.00024}$	$f_{2000}^{217}$	106.35	$106.6^{+4.2}_{-4.2}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.2^{+8.2}_{-8.2}$	$Y_{\text{P}}^{\text{BBN}}$	0.246718	$0.24671^{+0.00024}_{-0.00024}$	$\chi_{\text{lowTEB}}^2$	10495.0	$10496.2 (\nu: 4.1)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$10^5 D/H$	2.592	$2.59^{+0.10}_{-0.10}$	$\chi_{\text{plik}}^2$	764.1	$778.6 (\nu: 17.7)$
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.796	$13.796^{+0.083}_{-0.086}$	$\chi_{\text{prior}}^2$	2.0	$7.3 (\nu: 6.2)$
$c_{217}$	0.99604	$0.9960^{+0.0028}_{-0.0029}$	$z_*$	1089.88	$1089.90^{+0.94}_{-0.94}$	$\chi_{\text{CMB}}^2$	11259.1	$11274.8 (\nu: 16.3)$
$H_0$	67.51	$67.5^{+2.0}_{-2.0}$	$r_*$	144.55	$144.5^{+1.0}_{-0.99}$			
$\Omega_\Lambda$	0.6872	$0.687^{+0.027}_{-0.029}$	$100\theta_*$	1.04111	$1.04111^{+0.00092}_{-0.00093}$			

Best-fit  $\chi_{\text{eff}}^2 = 11261.11$ ;  $\bar{\chi}_{\text{eff}}^2 = 11282.07$ ;  $R - 1 = 0.00699$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.01 plik\_dx11dr2\_HM\_v18\_TT: 764.08

## 17.2 base\_nrun\_plikHM\_TT\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022430	$0.02240^{+0.00047}_{-0.00046}$	$\Omega_m h^2$	0.14202	$0.1421^{+0.0024}_{-0.0024}$	$r_{\text{drag}}$	147.30	$147.33^{+0.76}_{-0.73}$
$\Omega_c h^2$	0.11894	$0.1190^{+0.0025}_{-0.0025}$	$\Omega_m h^3$	0.09630	$0.0962^{+0.0010}_{-0.0010}$	$k_D$	0.14069	$0.1406^{+0.0010}_{-0.0010}$
$100\theta_{\text{MC}}$	1.04101	$1.04101^{+0.00081}_{-0.00083}$	$\sigma_8$	0.8371	$0.836^{+0.032}_{-0.030}$	$100\theta_D$	0.16072	$0.16077^{+0.00061}_{-0.00059}$
$\tau$	0.0922	$0.090^{+0.041}_{-0.038}$	$\sigma_8 \Omega_m^{0.5}$	0.4652	$0.465^{+0.021}_{-0.020}$	$z_{\text{eq}}$	3378	$3379^{+58}_{-58}$
$\ln(10^{10} A_s)$	3.119	$3.115^{+0.083}_{-0.078}$	$\sigma_8 \Omega_m^{0.25}$	0.6241	$0.623^{+0.025}_{-0.024}$	$k_{\text{eq}}$	0.010311	$0.01031^{+0.00018}_{-0.00018}$
$n_s$	0.9673	$0.9666^{+0.0092}_{-0.0090}$	$\sigma_8/h^{0.5}$	1.0166	$1.015^{+0.039}_{-0.037}$	$100\theta_{\text{eq}}$	0.8178	$0.818^{+0.011}_{-0.011}$
$dn_s/d \ln k$	-0.0082	$-0.008^{+0.016}_{-0.016}$	$\langle d^2 \rangle^{1/2}$	2.502	$2.500^{+0.086}_{-0.084}$	$100\theta_{s,\text{eq}}$	0.4517	$0.4516^{+0.0056}_{-0.0055}$
$y_{\text{cal}}$	1.00036	$1.0004^{+0.0050}_{-0.0048}$	$z_{\text{re}}$	11.17	$11.0^{+3.3}_{-3.5}$	$r_{\text{drag}}/D_V(0.57)$	0.07171	$0.07169^{+0.00085}_{-0.00082}$
$A_{217}^{\text{CIB}}$	67.5	$64^{+10}_{-10}$	$10^9 A_s$	2.262	$2.26^{+0.19}_{-0.18}$	$H(0.57)$	93.14	$93.12^{+0.59}_{-0.57}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8806	$1.881^{+0.024}_{-0.024}$	$D_A(0.57)$	1384.6	$1385^{+15}_{-16}$
$A_{143}^{\text{tSZ}}$	7.18	$4.9^{+3.8}_{-3.8}$	$D_{40}$	1218.5	$1219^{+39}_{-38}$	$F_{\text{AP}}(0.57)$	0.67537	$0.6755^{+0.0038}_{-0.0038}$
$A_{100}^{\text{PS}}$	255	$261^{+60}_{-60}$	$D_{220}$	5723	$5723^{+79}_{-78}$	$f\sigma_8(0.57)$	0.4860	$0.485^{+0.019}_{-0.018}$
$A_{143}^{\text{PS}}$	39.5	$45^{+20}_{-20}$	$D_{810}$	2536.4	$2536^{+28}_{-27}$	$\sigma_8(0.57)$	0.6234	$0.622^{+0.024}_{-0.023}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{1420}$	814.3	$814^{+10}_{-9.7}$	$f_{2000}^{143}$	30.1	$31^{+6}_{-6}$
$A_{217}^{\text{PS}}$	97.1	$97^{+20}_{-20}$	$D_{2000}$	230.26	$230.0^{+3.9}_{-3.6}$	$f_{2000}^{143 \times 217}$	32.62	$33^{+4}_{-5}$
$A^{\text{kSZ}}$	0.0	—	$n_{s,0.002}$	0.994	$0.994^{+0.052}_{-0.050}$	$f_{2000}^{217}$	106.18	$106.5^{+4.1}_{-4.1}$
$A_{100}^{\text{dustTT}}$	7.49	$7.5^{+3.6}_{-3.7}$	$Y_{\text{P}}$	0.245419	$0.24540^{+0.00021}_{-0.00021}$	$\chi_{\text{lowTEB}}^2$	10495.1	10496.1 ( $\nu$ : 3.9)
$A_{143}^{\text{dustTT}}$	9.09	$9.0^{+3.6}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.246746	$0.24673^{+0.00021}_{-0.00021}$	$\chi_{\text{plik}}^2$	764.1	778.0 ( $\nu$ : 17.4)
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.2}_{-8.1}$	$10^5 D/H$	2.580	$2.587^{+0.088}_{-0.086}$	$\chi_{6\text{DF}}^2$	0.015	0.059 ( $\nu$ : 0.0)
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-20}$	Age/Gyr	13.784	$13.788^{+0.062}_{-0.064}$	$\chi_{\text{MGS}}^2$	1.34	1.39 ( $\nu$ : 0.2)
$c_{100}$	0.99794	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1089.75	$1089.80^{+0.67}_{-0.67}$	$\chi_{\text{DR11CMass}}^2$	2.43	2.90 ( $\nu$ : 0.2)
$c_{217}$	0.99596	$0.9960^{+0.0028}_{-0.0028}$	$r_*$	144.66	$144.67^{+0.68}_{-0.66}$	$\chi_{\text{DR11LOWZ}}^2$	0.55	0.72 ( $\nu$ : 0.2)
$H_0$	67.81	$67.8^{+1.2}_{-1.1}$	$100\theta_*$	1.04119	$1.04119^{+0.00080}_{-0.00081}$	$\chi_{\text{prior}}^2$	2.0	7.3 ( $\nu$ : 6.2)
$\Omega_\Lambda$	0.6911	$0.691^{+0.015}_{-0.015}$	$D_A/\text{Gpc}$	13.894	$13.894^{+0.066}_{-0.065}$	$\chi_{\text{CMB}}^2$	11259.2	11274.1 ( $\nu$ : 15.6)
$\Omega_m$	0.3089	$0.309^{+0.015}_{-0.015}$	$z_{\text{drag}}$	1060.01	$1059.9^{+1.1}_{-1.1}$	$\chi_{\text{BAO}}^2$	4.34	5.1 ( $\nu$ : 0.5)

Best-fit  $\chi_{\text{eff}}^2 = 11265.56$ ;  $\bar{\chi}_{\text{eff}}^2 = 11286.45$ ;  $R - 1 = 0.00796$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.34 DR11CMass: 2.43 DR11LOWZ: 0.55 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.11 plik\_dx11dr2\_HM\_v18\_TT: 764.09

### 17.3 base\_nrun\_plikHM\_TT\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02240	$0.02239^{+0.00053}_{-0.00051}$	$\Omega_m$	0.3106	$0.311^{+0.026}_{-0.024}$	$D_A/\text{Gpc}$	13.889	$13.891^{+0.087}_{-0.085}$
$\Omega_c h^2$	0.11922	$0.1192^{+0.0041}_{-0.0041}$	$\Omega_m h^2$	0.14226	$0.1422^{+0.0039}_{-0.0038}$	$z_{\text{drag}}$	1059.97	$1059.9^{+1.1}_{-1.1}$
$100\theta_{\text{MC}}$	1.04097	$1.04098^{+0.00092}_{-0.00094}$	$\Omega_m h^3$	0.09627	$0.0962^{+0.0010}_{-0.0010}$	$r_{\text{drag}}$	147.26	$147.29^{+0.95}_{-0.94}$
$\tau$	0.0895	$0.090^{+0.045}_{-0.042}$	$\sigma_8$	0.8361	$0.836^{+0.032}_{-0.031}$	$k_D$	0.14071	$0.1407^{+0.0011}_{-0.0011}$
$\ln(10^{10} A_s)$	3.114	$3.115^{+0.087}_{-0.082}$	$\sigma_8 \Omega_m^{0.5}$	0.4660	$0.466^{+0.026}_{-0.025}$	$100\theta_D$	0.16075	$0.16077^{+0.00062}_{-0.00062}$
$n_s$	0.9669	$0.966^{+0.013}_{-0.012}$	$\sigma_8 \Omega_m^{0.25}$	0.6242	$0.624^{+0.027}_{-0.026}$	$z_{\text{eq}}$	3384	$3383^{+94}_{-92}$
$dn_s/d \ln k$	-0.0077	$-0.009^{+0.016}_{-0.016}$	$\sigma_8/h^{0.5}$	1.0163	$1.016^{+0.040}_{-0.039}$	$k_{\text{eq}}$	0.010329	$0.01033^{+0.00029}_{-0.00028}$
$y_{\text{cal}}$	1.00037	$1.0004^{+0.0050}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.501	$2.502^{+0.090}_{-0.089}$	$100\theta_{\text{eq}}$	0.8166	$0.817^{+0.018}_{-0.017}$
$A_{217}^{\text{CIB}}$	67.4	$64^{+10}_{-10}$	$z_{\text{re}}$	10.95	$10.9^{+3.8}_{-3.7}$	$100\theta_{\text{s,eq}}$	0.4511	$0.4513^{+0.0091}_{-0.0089}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.02	—	$10^9 A_s$	2.251	$2.25^{+0.20}_{-0.19}$	$r_{\text{drag}}/D_V(0.57)$	0.07161	$0.0716^{+0.0014}_{-0.0014}$
$A_{143}^{\text{tSZ}}$	6.99	$4.9^{+3.9}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8817	$1.882^{+0.028}_{-0.027}$	$H(0.57)$	93.08	$93.09^{+0.88}_{-0.82}$
$A_{100}^{\text{PS}}$	254	$261^{+60}_{-60}$	$D_{40}$	1219.2	$1220^{+43}_{-41}$	$D_A(0.57)$	1386.3	$1386^{+25}_{-25}$
$A_{143}^{\text{PS}}$	40.2	$45^{+20}_{-20}$	$D_{220}$	5721	$5722^{+81}_{-79}$	$F_{\text{AP}}(0.57)$	0.6758	$0.6758^{+0.0065}_{-0.0062}$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$D_{810}$	2536.9	$2536^{+28}_{-27}$	$f\sigma_8(0.57)$	0.4859	$0.486^{+0.020}_{-0.019}$
$A_{217}^{\text{PS}}$	97.5	$97^{+20}_{-20}$	$D_{1420}$	814.5	$814^{+10}_{-9.9}$	$\sigma_8(0.57)$	0.6222	$0.622^{+0.025}_{-0.024}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.29	$229.9^{+4.0}_{-3.7}$	$f_{2000}^{143}$	30.1	$31^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.53	$7.5^{+3.6}_{-3.6}$	$n_{\text{s},0.002}$	0.992	$0.994^{+0.054}_{-0.051}$	$f_{2000}^{143 \times 217}$	32.60	$33^{+4}_{-5}$
$A_{143}^{\text{dustTT}}$	9.05	$9.0^{+3.6}_{-3.6}$	$Y_{\text{P}}$	0.245407	$0.24540^{+0.00024}_{-0.00023}$	$f_{2000}^{217}$	106.16	$106.5^{+4.1}_{-4.2}$
$A_{143 \times 217}^{\text{dustTT}}$	17.4	$17.2^{+8.2}_{-8.1}$	$Y_{\text{P}}^{\text{BBN}}$	0.246733	$0.24673^{+0.00024}_{-0.00023}$	$\chi_{\text{lowTEB}}^2$	10494.9	$10496.2 (\nu: 4.1)$
$A_{217}^{\text{dustTT}}$	81.4	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	2.585	$2.588^{+0.097}_{-0.098}$	$\chi_{\text{plik}}^2$	764.3	$778.5 (\nu: 17.9)$
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.789	$13.790^{+0.078}_{-0.082}$	$\chi_{\text{JLA}}^2$	706.72	$706.86 (\nu: 0.1)$
$c_{217}$	0.99589	$0.9960^{+0.0028}_{-0.0028}$	$z_*$	1089.81	$1089.83^{+0.89}_{-0.88}$	$\chi_{\text{prior}}^2$	1.9	$7.3 (\nu: 6.2)$
$H_0$	67.67	$67.7^{+1.9}_{-1.9}$	$r_*$	144.61	$144.63^{+0.93}_{-0.93}$	$\chi_{\text{CMB}}^2$	11259.2	$11274.7 (\nu: 16.2)$
$\Omega_\Lambda$	0.6894	$0.689^{+0.024}_{-0.026}$	$100\theta_*$	1.04116	$1.04117^{+0.00090}_{-0.00091}$			

Best-fit  $\chi_{\text{eff}}^2 = 11967.90$ ;  $\bar{\chi}_{\text{eff}}^2 = 11988.82$ ;  $R - 1 = 0.00688$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10494.94 plik\_dx11dr2\_HM\_v18\_TT: 764.30 SN - JLA December\_2013: 706.72

## 17.4 base\_nrun\_plikHM\_TT\_lowTEB\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02231	$0.02229^{+0.00052}_{-0.00051}$	$\Omega_m$	0.3066	$0.307^{+0.026}_{-0.024}$	$D_A/\text{Gpc}$	13.915	$13.917^{+0.084}_{-0.084}$
$\Omega_c h^2$	0.11842	$0.1184^{+0.0042}_{-0.0040}$	$\Omega_m h^2$	0.14137	$0.1413^{+0.0039}_{-0.0036}$	$z_{\text{drag}}$	1059.67	$1059.6^{+1.1}_{-1.0}$
$100\theta_{\text{MC}}$	1.04104	$1.04106^{+0.00097}_{-0.00093}$	$\Omega_m h^3$	0.09599	$0.0960^{+0.0010}_{-0.00098}$	$r_{\text{drag}}$	147.58	$147.61^{+0.92}_{-0.91}$
$\tau$	0.0678	$0.068^{+0.035}_{-0.035}$	$\sigma_8$	0.8157	$0.816^{+0.019}_{-0.019}$	$k_D$	0.14030	$0.14026^{+0.00099}_{-0.0010}$
$\ln(10^{10} A_s)$	3.066	$3.068^{+0.063}_{-0.061}$	$\sigma_8 \Omega_m^{0.5}$	0.4517	$0.452^{+0.018}_{-0.017}$	$100\theta_D$	0.16091	$0.16094^{+0.00059}_{-0.00058}$
$n_s$	0.9682	$0.968^{+0.012}_{-0.012}$	$\sigma_8 \Omega_m^{0.25}$	0.6070	$0.607^{+0.015}_{-0.015}$	$z_{\text{eq}}$	3363	$3362^{+94}_{-87}$
$dn_s/d \ln k$	-0.0023	$-0.003^{+0.015}_{-0.015}$	$\sigma_8/h^{0.5}$	0.9899	$0.990^{+0.022}_{-0.021}$	$k_{\text{eq}}$	0.010264	$0.01026^{+0.00029}_{-0.00027}$
$y_{\text{cal}}$	1.00010	$1.0002^{+0.0049}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.445	$2.445^{+0.053}_{-0.050}$	$100\theta_{\text{eq}}$	0.8203	$0.821^{+0.017}_{-0.018}$
$A_{217}^{\text{CIB}}$	67.8	$65^{+10}_{-10}$	$z_{\text{re}}$	8.99	$9.0^{+3.0}_{-3.5}$	$100\theta_{\text{s,eq}}$	0.4531	$0.4532^{+0.0090}_{-0.0091}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.146	$2.15^{+0.14}_{-0.13}$	$r_{\text{drag}}/D_V(0.57)$	0.07186	$0.0719^{+0.0014}_{-0.0014}$
$A_{143}^{\text{tSZ}}$	7.24	$4.8^{+4.0}_{-3.9}$	$10^9 A_s e^{-2\tau}$	1.8743	$1.875^{+0.025}_{-0.027}$	$H(0.57)$	93.11	$93.12^{+0.91}_{-0.83}$
$A_{100}^{\text{PS}}$	255	$263^{+50}_{-60}$	$D_{40}$	1219.3	$1219^{+42}_{-42}$	$D_A(0.57)$	1383.8	$1384^{+25}_{-26}$
$A_{143}^{\text{PS}}$	39.5	$45^{+20}_{-20}$	$D_{220}$	5717	$5718^{+80}_{-80}$	$F_{\text{AP}}(0.57)$	0.6748	$0.6748^{+0.0066}_{-0.0061}$
$A_{143 \times 217}^{\text{PS}}$	33	$38^{+20}_{-20}$	$D_{810}$	2533.2	$2533^{+27}_{-26}$	$f\sigma_8(0.57)$	0.4730	$0.473^{+0.010}_{-0.010}$
$A_{217}^{\text{PS}}$	96.8	$96^{+20}_{-20}$	$D_{1420}$	814.8	$814^{+11}_{-11}$	$\sigma_8(0.57)$	0.6080	$0.608^{+0.017}_{-0.017}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.05	$229.7^{+4.0}_{-3.8}$	$f_{2000}^{143}$	30.2	$31^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.44	$7.5^{+3.6}_{-3.5}$	$n_{\text{s},0.002}$	0.9756	$0.978^{+0.048}_{-0.047}$	$f_{2000}^{143 \times 217}$	32.75	$33^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.15	$9.1^{+3.6}_{-3.7}$	$Y_{\text{P}}$	0.245365	$0.24536^{+0.00023}_{-0.00023}$	$f_{2000}^{217}$	106.24	$106.7^{+4.1}_{-4.1}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.3^{+8.4}_{-8.1}$	$Y_{\text{P}}^{\text{BBN}}$	0.246692	$0.24668^{+0.00023}_{-0.00023}$	$\chi_{\text{lensing}}^2$	9.36	10.1 ( $\nu$ : 1.5)
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	2.603	$2.606^{+0.098}_{-0.096}$	$\chi_{\text{lowTEB}}^2$	10494.21	10495.2 ( $\nu$ : 2.7)
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.794	$13.794^{+0.079}_{-0.084}$	$\chi_{\text{plik}}^2$	766.7	780.7 ( $\nu$ : 17.3)
$c_{217}$	0.99601	$0.9960^{+0.0029}_{-0.0029}$	$z_*$	1089.86	$1089.88^{+0.89}_{-0.88}$	$\chi_{\text{prior}}^2$	2.1	7.3 ( $\nu$ : 6.4)
$H_0$	67.90	$67.9^{+1.9}_{-1.9}$	$r_*$	144.89	$144.91^{+0.90}_{-0.91}$	$\chi_{\text{CMB}}^2$	11270.2	11286.0 ( $\nu$ : 16.4)
$\Omega_\Lambda$	0.6934	$0.693^{+0.024}_{-0.026}$	$100\theta_*$	1.04123	$1.04126^{+0.00093}_{-0.00091}$			

Best-fit  $\chi_{\text{eff}}^2 = 11272.34$ ;  $\bar{\chi}_{\text{eff}}^2 = 11293.36$ ;  $R - 1 = 0.02203$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.36 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.21 plik\_dx11dr2\_HM\_v18\_TT: 766.68

## 17.5 base\_nrun\_plikHM\_TT\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02240	$0.02241^{+0.00054}_{-0.00051}$	$\Omega_m$	0.3099	$0.310^{+0.027}_{-0.025}$	$D_A/\text{Gpc}$	13.892	$13.893^{+0.088}_{-0.088}$
$\Omega_c h^2$	0.11910	$0.1191^{+0.0043}_{-0.0042}$	$\Omega_m h^2$	0.14215	$0.1421^{+0.0041}_{-0.0040}$	$z_{\text{drag}}$	1059.93	$1060.0^{+1.1}_{-1.1}$
$100\theta_{\text{MC}}$	1.04100	$1.04101^{+0.00093}_{-0.00094}$	$\Omega_m h^3$	0.09627	$0.0963^{+0.0010}_{-0.0010}$	$r_{\text{drag}}$	147.29	$147.30^{+0.97}_{-0.96}$
$\tau$	0.0894	$0.091^{+0.045}_{-0.042}$	$\sigma_8$	0.8354	$0.836^{+0.032}_{-0.031}$	$k_D$	0.14068	$0.1407^{+0.0011}_{-0.0011}$
$\ln(10^{10} A_s)$	3.113	$3.116^{+0.088}_{-0.082}$	$\sigma_8 \Omega_m^{0.5}$	0.4650	$0.465^{+0.026}_{-0.026}$	$100\theta_D$	0.16075	$0.16076^{+0.00063}_{-0.00062}$
$n_s$	0.9670	$0.967^{+0.013}_{-0.013}$	$\sigma_8 \Omega_m^{0.25}$	0.6233	$0.624^{+0.027}_{-0.026}$	$z_{\text{eq}}$	3381	$3381^{+97}_{-95}$
$dn_s/d \ln k$	-0.0074	$-0.009^{+0.016}_{-0.016}$	$\sigma_8/h^{0.5}$	1.0151	$1.016^{+0.041}_{-0.040}$	$k_{\text{eq}}$	0.010320	$0.01032^{+0.00030}_{-0.00029}$
$y_{\text{cal}}$	1.00024	$1.0004^{+0.0050}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.499	$2.501^{+0.091}_{-0.090}$	$100\theta_{\text{eq}}$	0.8172	$0.817^{+0.018}_{-0.018}$
$A_{217}^{\text{CIB}}$	67.6	$64^{+10}_{-10}$	$z_{\text{re}}$	10.93	$11.0^{+3.8}_{-3.7}$	$100\theta_{\text{s,eq}}$	0.4514	$0.4515^{+0.0094}_{-0.0093}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.249	$2.26^{+0.20}_{-0.19}$	$r_{\text{drag}}/D_V(0.57)$	0.07165	$0.0717^{+0.0015}_{-0.0014}$
$A_{143}^{\text{tSZ}}$	7.13	$5.0^{+3.9}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8805	$1.881^{+0.028}_{-0.027}$	$H(0.57)$	93.11	$93.12^{+0.90}_{-0.85}$
$A_{100}^{\text{PS}}$	255	$261^{+60}_{-60}$	$D_{40}$	1219.2	$1219^{+43}_{-41}$	$D_A(0.57)$	1385.6	$1385^{+26}_{-26}$
$A_{143}^{\text{PS}}$	39.4	$45^{+20}_{-20}$	$D_{220}$	5720	$5723^{+81}_{-79}$	$F_{\text{AP}}(0.57)$	0.6756	$0.6756^{+0.0068}_{-0.0065}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{810}$	2536.0	$2536^{+28}_{-27}$	$f\sigma_8(0.57)$	0.4853	$0.486^{+0.020}_{-0.019}$
$A_{217}^{\text{PS}}$	97.0	$97^{+20}_{-20}$	$D_{1420}$	814.3	$814^{+11}_{-9.9}$	$\sigma_8(0.57)$	0.6219	$0.623^{+0.026}_{-0.024}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.23	$230.0^{+4.0}_{-3.7}$	$f_{2000}^{143}$	30.0	$31^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.49	$7.5^{+3.6}_{-3.6}$	$n_{\text{s},0.002}$	0.991	$0.995^{+0.055}_{-0.051}$	$f_{2000}^{143 \times 217}$	32.58	$33^{+4}_{-5}$
$A_{143}^{\text{dustTT}}$	9.09	$9.0^{+3.6}_{-3.6}$	$Y_{\text{P}}$	0.245408	$0.24541^{+0.00024}_{-0.00023}$	$f_{2000}^{217}$	106.15	$106.5^{+4.1}_{-4.2}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.2^{+8.2}_{-8.1}$	$Y_{\text{P}}^{\text{BBN}}$	0.246734	$0.24673^{+0.00024}_{-0.00023}$	$\chi_{\text{lowTEB}}^2$	10495.0	$10496.2 (\nu: 4.2)$
$A_{217}^{\text{dustTT}}$	81.8	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	2.585	$2.585^{+0.098}_{-0.099}$	$\chi_{\text{plik}}^2$	764.1	$778.6 (\nu: 18.1)$
$c_{100}$	0.99790	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.788	$13.787^{+0.081}_{-0.082}$	$\chi_{\text{H070p6}}^2$	0.75	$0.82 (\nu: 0.1)$
$c_{217}$	0.99598	$0.9960^{+0.0028}_{-0.0029}$	$z_*$	1089.80	$1089.80^{+0.91}_{-0.90}$	$\chi_{\text{prior}}^2$	2.1	$7.3 (\nu: 6.2)$
$H_0$	67.73	$67.8^{+2.0}_{-1.9}$	$r_*$	144.64	$144.65^{+0.95}_{-0.96}$	$\chi_{\text{CMB}}^2$	11259.1	$11274.8 (\nu: 16.4)$
$\Omega_\Lambda$	0.6901	$0.690^{+0.025}_{-0.027}$	$100\theta_*$	1.04118	$1.04119^{+0.00090}_{-0.00092}$			

Best-fit  $\chi_{\text{eff}}^2 = 11261.92$ ;  $\bar{\chi}_{\text{eff}}^2 = 11282.88$ ;  $R - 1 = 0.00688$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10494.98 plik\_dx11dr2\_HM\_v18\_TT: 764.12 Hubble - H070p6: 0.75

## 17.6 base\_nrun\_plikHM\_TT\_lowTEB\_post\_lensing\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022322	$0.02230^{+0.00045}_{-0.00043}$	$\Omega_m h^3$	0.09602	$0.0960^{+0.0010}_{-0.00098}$	$100\theta_D$	0.16091	$0.16093^{+0.00054}_{-0.00056}$
$\Omega_c h^2$	0.11829	$0.1183^{+0.0024}_{-0.0024}$	$\sigma_8$	0.8169	$0.816^{+0.018}_{-0.017}$	$z_{\text{eq}}$	3360	$3360^{+56}_{-55}$
$100\theta_{\text{MC}}$	1.04110	$1.04107^{+0.00079}_{-0.00083}$	$\sigma_8 \Omega_m^{0.5}$	0.4517	$0.451^{+0.013}_{-0.013}$	$k_{\text{eq}}$	0.010255	$0.01025^{+0.00017}_{-0.00017}$
$\tau$	0.0701	$0.069^{+0.025}_{-0.026}$	$\sigma_8 \Omega_m^{0.25}$	0.6075	$0.607^{+0.014}_{-0.014}$	$100\theta_{\text{eq}}$	0.8209	$0.821^{+0.010}_{-0.010}$
$\ln(10^{10} A_s)$	3.0703	$3.069^{+0.048}_{-0.048}$	$\sigma_8/h^{0.5}$	0.9909	$0.990^{+0.021}_{-0.021}$	$100\theta_{s,\text{eq}}$	0.4534	$0.4534^{+0.0053}_{-0.0053}$
$n_s$	0.9686	$0.9677^{+0.0091}_{-0.0088}$	$\langle d^2 \rangle^{1/2}$	2.447	$2.446^{+0.052}_{-0.049}$	$r_{\text{drag}}/D_V(0.57)$	0.07191	$0.07191^{+0.00080}_{-0.00081}$
$dn_s/d \ln k$	-0.0026	$-0.003^{+0.015}_{-0.014}$	$z_{\text{re}}$	9.20	$9.1^{+2.4}_{-2.5}$	$H(0.57)$	93.15	$93.13^{+0.57}_{-0.54}$
$y_{\text{cal}}$	0.99999	$1.0002^{+0.0049}_{-0.0049}$	$10^9 A_s$	2.155	$2.15^{+0.11}_{-0.10}$	$D_A(0.57)$	1382.8	$1383^{+15}_{-15}$
$A_{217}^{\text{CIB}}$	67.8	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8732	$1.874^{+0.022}_{-0.022}$	$F_{\text{AP}}(0.57)$	0.67455	$0.6746^{+0.0037}_{-0.0035}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1217.9	$1219^{+39}_{-39}$	$f\sigma_8(0.57)$	0.4735	$0.473^{+0.010}_{-0.0099}$
$A_{143}^{\text{tSZ}}$	7.18	$4.8^{+3.9}_{-3.9}$	$D_{220}$	5715	$5719^{+78}_{-80}$	$\sigma_8(0.57)$	0.6092	$0.608^{+0.014}_{-0.014}$
$A_{100}^{\text{PS}}$	255	$264^{+50}_{-50}$	$D_{810}$	2532.4	$2533^{+27}_{-26}$	$f_{2000}^{143}$	30.3	$31^{+6}_{-6}$
$A_{143}^{\text{PS}}$	39.9	$45^{+20}_{-20}$	$D_{1420}$	814.5	$814^{+10}_{-10}$	$f_{2000}^{143 \times 217}$	32.83	$33^{+4}_{-5}$
$A_{143 \times 217}^{\text{PS}}$	33	$38^{+20}_{-20}$	$D_{2000}$	230.04	$229.7^{+3.8}_{-3.8}$	$f_{2000}^{217}$	106.26	$106.7^{+4.1}_{-4.0}$
$A_{217}^{\text{PS}}$	96.8	$96^{+20}_{-20}$	$n_{s,0.002}$	0.9770	$0.978^{+0.047}_{-0.046}$	$\chi^2_{\text{lensing}}$	9.44	10.1 ( $\nu: 1.4$ )
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.245372	$0.24536^{+0.00020}_{-0.00020}$	$\chi^2_{\text{lowTEB}}$	10494.15	10494.9 ( $\nu: 2.3$ )
$A_{100}^{\text{dustTT}}$	7.51	$7.5^{+3.6}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.246698	$0.24669^{+0.00020}_{-0.00020}$	$\chi^2_{\text{plik}}$	766.7	780.3 ( $\nu: 16.4$ )
$A_{143}^{\text{dustTT}}$	9.21	$9.1^{+3.6}_{-3.7}$	$10^5 \text{D}/\text{H}$	2.600	$2.604^{+0.082}_{-0.085}$	$\chi^2_{\text{H070p6}}$	0.63	0.66 ( $\nu: 0.0$ )
$A_{143 \times 217}^{\text{dustTT}}$	17.9	$17.2^{+8.4}_{-8.0}$	$\text{Age}/\text{Gyr}$	13.790	$13.792^{+0.059}_{-0.061}$	$\chi^2_{\text{JLA}}$	706.607	706.65 ( $\nu: 0.0$ )
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$z_*$	1089.83	$1089.86^{+0.61}_{-0.64}$	$\chi^2_{6\text{DF}}$	0.001	0.038 ( $\nu: 0.0$ )
$c_{100}$	0.99790	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.91	$144.93^{+0.62}_{-0.61}$	$\chi^2_{\text{MGS}}$	1.61	1.67 ( $\nu: 0.2$ )
$c_{217}$	0.99600	$0.9960^{+0.0030}_{-0.0027}$	$100\theta_*$	1.04128	$1.04127^{+0.00076}_{-0.00081}$	$\chi^2_{\text{DR11CMass}}$	2.44	2.84 ( $\nu: 0.2$ )
$H_0$	67.98	$68.0^{+1.1}_{-1.1}$	$D_A/\text{Gpc}$	13.917	$13.918^{+0.060}_{-0.061}$	$\chi^2_{\text{DR11LOWZ}}$	0.32	0.45 ( $\nu: 0.1$ )
$\Omega_\Lambda$	0.6943	$0.694^{+0.014}_{-0.014}$	$z_{\text{drag}}$	1059.70	$1059.7^{+1.0}_{-0.98}$	$\chi^2_{\text{prior}}$	2.1	7.3 ( $\nu: 6.4$ )
$\Omega_m$	0.3057	$0.306^{+0.014}_{-0.014}$	$r_{\text{drag}}$	147.60	$147.62^{+0.68}_{-0.66}$	$\chi^2_{\text{CMB}}$	11270.2	11285.3 ( $\nu: 15.3$ )
$\Omega_m h^2$	0.14125	$0.1412^{+0.0024}_{-0.0023}$	$k_D$	0.14030	$0.14025^{+0.00091}_{-0.00093}$	$\chi^2_{\text{BAO}}$	4.37	5.00 ( $\nu: 0.4$ )

Best-fit  $\chi^2_{\text{eff}} = 11983.96$ ;  $\bar{\chi}^2_{\text{eff}} = 12004.87$ ;  $R - 1 = 0.03030$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMass: 2.44 DR11LOWZ: 0.32 CMB - smica\_g30\_ftl\_full\_pp: 9.44 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.15 plik\_dx11dr2\_HM\_v18\_TT: 766.65 Hubble - H070p6: 0.62 SN - JLA December\_2013: 706.61



## 17.7 base\_nrun\_plikHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00054}_{-0.00052}$	$\Omega_m$	$0.313^{+0.029}_{-0.026}$	$D_A/\text{Gpc}$	$13.884^{+0.092}_{-0.092}$
$\Omega_c h^2$	$0.1196^{+0.0045}_{-0.0044}$	$\Omega_m h^2$	$0.1426^{+0.0043}_{-0.0041}$	$z_{\text{drag}}$	$1059.9^{+1.1}_{-1.1}$
$100\theta_{\text{MC}}$	$1.04093^{+0.00094}_{-0.00095}$	$\Omega_m h^3$	$0.0962^{+0.0010}_{-0.0010}$	$r_{\text{drag}}$	$147.2^{+1.0}_{-0.99}$
$\tau$	$0.089^{+0.043}_{-0.041}$	$\sigma_8$	$0.836^{+0.031}_{-0.031}$	$k_D$	$0.1407^{+0.0011}_{-0.0011}$
$\ln(10^{10} A_s)$	$3.113^{+0.083}_{-0.081}$	$\sigma_8 \Omega_m^{0.5}$	$0.468^{+0.027}_{-0.026}$	$100\theta_D$	$0.16079^{+0.00062}_{-0.00062}$
$n_s$	$0.965^{+0.013}_{-0.013}$	$\sigma_8 \Omega_m^{0.25}$	$0.626^{+0.027}_{-0.026}$	$z_{\text{eq}}$	$3392^{+100}_{-98}$
$dn_s/d \ln k$	$-0.009^{+0.016}_{-0.016}$	$\sigma_8/h^{0.5}$	$1.018^{+0.040}_{-0.039}$	$k_{\text{eq}}$	$0.01035^{+0.00031}_{-0.00030}$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	$2.506^{+0.091}_{-0.087}$	$100\theta_{\text{eq}}$	$0.815^{+0.019}_{-0.019}$
$A_{217}^{\text{CIB}}$	$65^{+10}_{-10}$	$z_{\text{re}}$	$10.8^{+3.5}_{-3.4}$	$100\theta_{\text{s,eq}}$	$0.4504^{+0.0097}_{-0.0098}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s$	$2.25^{+0.19}_{-0.18}$	$r_{\text{drag}}/D_V(0.57)$	$0.0715^{+0.0015}_{-0.0015}$
$A_{143}^{\text{tSZ}}$	$4.9^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.029}_{-0.028}$	$H(0.57)$	$93.02^{+0.93}_{-0.85}$
$A_{100}^{\text{PS}}$	$261^{+60}_{-60}$	$D_{40}$	$1222^{+43}_{-41}$	$D_A(0.57)$	$1389^{+27}_{-27}$
$A_{143}^{\text{PS}}$	$45^{+20}_{-20}$	$D_{220}$	$5721^{+81}_{-78}$	$F_{\text{AP}}(0.57)$	$0.6764^{+0.0071}_{-0.0068}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$D_{810}$	$2536^{+28}_{-27}$	$f\sigma_8(0.57)$	$0.487^{+0.020}_{-0.019}$
$A_{217}^{\text{PS}}$	$97^{+20}_{-20}$	$D_{1420}$	$813^{+11}_{-9.9}$	$\sigma_8(0.57)$	$0.622^{+0.024}_{-0.024}$
$A^{\text{kSZ}}$	—	$D_{2000}$	$229.8^{+4.0}_{-3.7}$	$f_{2000}^{143}$	$31^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	$7.5^{+3.6}_{-3.7}$	$n_{\text{s},0.002}$	$0.993^{+0.054}_{-0.051}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-5}$
$A_{143}^{\text{dustTT}}$	$9.0^{+3.6}_{-3.6}$	$Y_{\text{P}}$	$0.24539^{+0.00024}_{-0.00023}$	$f_{2000}^{217}$	$106.6^{+4.2}_{-4.2}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.2^{+8.1}_{-8.1}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24671^{+0.00024}_{-0.00024}$	$\chi^2_{\text{lowTEB}}$	$10496.2 (\nu: 4.1)$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	$2.593^{+0.099}_{-0.099}$	$\chi^2_{\text{plik}}$	$778.5 (\nu: 17.8)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$\text{Age}/\text{Gyr}$	$13.795^{+0.082}_{-0.085}$	$\chi^2_{\text{prior}}$	$7.3 (\nu: 6.2)$
$c_{217}$	$0.9960^{+0.0028}_{-0.0029}$	$z_*$	$1089.89^{+0.92}_{-0.93}$	$\chi^2_{\text{CMB}}$	$11274.7 (\nu: 16.1)$
$H_0$	$67.5^{+2.0}_{-2.0}$	$r_*$	$144.55^{+0.99}_{-1.0}$		
$\Omega_\Lambda$	$0.687^{+0.026}_{-0.029}$	$100\theta_*$	$1.04112^{+0.00092}_{-0.00093}$		

$$\bar{\chi}^2_{\text{eff}} = 11281.97; R - 1 = 0.00630$$

## 17.8 base\_nrun\_plikHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022291	$0.02229^{+0.00033}_{-0.00032}$	$A_{100 \times 217}^{\text{dustTE}}$	0.302	$0.30^{+0.17}_{-0.16}$	Age/Gyr	13.809	$13.809^{+0.052}_{-0.052}$
$\Omega_c h^2$	0.11982	$0.1198^{+0.0029}_{-0.0029}$	$A_{143}^{\text{dustTE}}$	0.154	$0.15^{+0.11}_{-0.10}$	$z_*$	1090.00	$1090.00^{+0.60}_{-0.59}$
$100\theta_{\text{MC}}$	1.04076	$1.04078^{+0.00063}_{-0.00063}$	$A_{143 \times 217}^{\text{dustTE}}$	0.337	$0.34^{+0.16}_{-0.16}$	$r_*$	144.54	$144.53^{+0.64}_{-0.64}$
$\tau$	0.0844	$0.083^{+0.036}_{-0.036}$	$A_{217}^{\text{dustTE}}$	1.672	$1.67^{+0.50}_{-0.49}$	$100\theta_*$	1.04096	$1.04097^{+0.00062}_{-0.00062}$
$\ln(10^{10} A_s)$	3.105	$3.103^{+0.071}_{-0.070}$	$c_{100}$	0.99821	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.885	$13.885^{+0.059}_{-0.059}$
$n_s$	0.9642	$0.9639^{+0.0098}_{-0.0099}$	$c_{217}$	0.99600	$0.9960^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.74	$1059.74^{+0.66}_{-0.65}$
$dn_s/d \ln k$	-0.0051	$-0.006^{+0.014}_{-0.014}$	$H_0$	67.30	$67.3^{+1.3}_{-1.3}$	$r_{\text{drag}}$	147.23	$147.22^{+0.63}_{-0.63}$
$y_{\text{cal}}$	1.00015	$1.0003^{+0.0049}_{-0.0050}$	$\Omega_\Lambda$	0.6848	$0.685^{+0.018}_{-0.018}$	$k_D$	0.14066	$0.14067^{+0.00067}_{-0.00067}$
$A_{217}^{\text{CIB}}$	67.4	$65^{+10}_{-10}$	$\Omega_m$	0.3152	$0.315^{+0.018}_{-0.018}$	$100\theta_D$	0.160849	$0.16085^{+0.00038}_{-0.00038}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.06	—	$\Omega_m h^2$	0.14276	$0.1428^{+0.0027}_{-0.0027}$	$z_{\text{eq}}$	3396	$3396^{+66}_{-65}$
$A_{143}^{\text{tSZ}}$	7.18	$5.1^{+3.7}_{-3.8}$	$\Omega_m h^3$	0.09608	$0.09609^{+0.00061}_{-0.00061}$	$k_{\text{eq}}$	0.010365	$0.01037^{+0.00020}_{-0.00020}$
$A_{100}^{\text{PS}}$	258	$263^{+50}_{-50}$	$\sigma_8$	0.8343	$0.834^{+0.027}_{-0.027}$	$100\theta_{\text{eq}}$	0.8141	$0.814^{+0.012}_{-0.012}$
$A_{143}^{\text{PS}}$	40.5	$45^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4684	$0.468^{+0.019}_{-0.020}$	$100\theta_{s,\text{eq}}$	0.4498	$0.4498^{+0.0063}_{-0.0063}$
$A_{143 \times 217}^{\text{PS}}$	34.9	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6251	$0.625^{+0.021}_{-0.022}$	$r_{\text{drag}}/D_V(0.57)$	0.07136	$0.07137^{+0.00099}_{-0.00096}$
$A_{217}^{\text{PS}}$	97.9	$97^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0169	$1.016^{+0.033}_{-0.033}$	$H(0.57)$	92.89	$92.90^{+0.57}_{-0.55}$
$A^{\text{kSZ}}$	0.0	—	$\langle d^2 \rangle^{1/2}$	2.509	$2.507^{+0.077}_{-0.079}$	$D_A(0.57)$	1391.6	$1392^{+17}_{-18}$
$A_{100}^{\text{dustTT}}$	7.41	$7.5^{+3.6}_{-3.6}$	$z_{\text{re}}$	10.55	$10.4^{+3.2}_{-3.3}$	$F_{\text{AP}}(0.57)$	0.67696	$0.6770^{+0.0046}_{-0.0045}$
$A_{143}^{\text{dustTT}}$	8.96	$8.9^{+3.6}_{-3.6}$	$10^9 A_s$	2.230	$2.23^{+0.16}_{-0.15}$	$f\sigma_8(0.57)$	0.4860	$0.486^{+0.016}_{-0.016}$
$A_{143 \times 217}^{\text{dustTT}}$	17.4	$17.0^{+8.1}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8837	$1.885^{+0.025}_{-0.025}$	$\sigma_8(0.57)$	0.6197	$0.619^{+0.021}_{-0.021}$
$A_{217}^{\text{dustTT}}$	81.5	$82^{+10}_{-10}$	$D_{40}$	1230.0	$1230^{+38}_{-37}$	$f_{2000}^{143}$	30.0	$30^{+6}_{-6}$
$A_{100}^{\text{dustEE}}$	0.0817	$0.082^{+0.011}_{-0.011}$	$D_{220}$	5724	$5727^{+76}_{-76}$	$f_{2000}^{143 \times 217}$	32.72	$33^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0492	$0.0493^{+0.0097}_{-0.0099}$	$D_{810}$	2536.1	$2537^{+27}_{-27}$	$f_{2000}^{217}$	106.23	$106.4^{+4.0}_{-4.0}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.099^{+0.065}_{-0.063}$	$D_{1420}$	813.6	$813.6^{+9.6}_{-9.9}$	$\chi_{\text{lowTEB}}^2$	10495.7	$10496.5 (\nu: 3.7)$
$A_{143}^{\text{dustEE}}$	0.1005	$0.101^{+0.014}_{-0.014}$	$D_{2000}$	229.87	$229.8^{+3.5}_{-3.5}$	$\chi_{\text{plik}}^2$	2432.3	$2452.1 (\nu: 24.6)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.223^{+0.092}_{-0.091}$	$n_{s,0.002}$	0.9806	$0.982^{+0.045}_{-0.044}$	$\chi_{\text{prior}}^2$	7.1	$19.4 (\nu: 15.0)$
$A_{217}^{\text{dustEE}}$	0.648	$0.65^{+0.26}_{-0.26}$	$Y_P$	0.245358	$0.24536^{+0.00015}_{-0.00015}$	$\chi_{\text{CMB}}^2$	12928.0	$12948.6 (\nu: 23.0)$
$A_{100}^{\text{dustTE}}$	0.141	$0.140^{+0.074}_{-0.075}$	$Y_P^{\text{BBN}}$	0.246685	$0.24668^{+0.00015}_{-0.00015}$			
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.131^{+0.057}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.606	$2.606^{+0.062}_{-0.061}$			

Best-fit  $\chi_{\text{eff}}^2 = 12935.12$ ;  $\bar{\chi}_{\text{eff}}^2 = 12968.06$ ;  $R - 1 = 0.00882$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.74 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2432.30

## 17.9 base\_nrun\_plikHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022330	$0.02233^{+0.00029}_{-0.00029}$	$A_{143}^{\text{dustTE}}$	0.153	$0.15^{+0.11}_{-0.10}$	$r_*$	144.659	$144.66^{+0.50}_{-0.50}$
$\Omega_c h^2$	0.11924	$0.1192^{+0.0021}_{-0.0021}$	$A_{143 \times 217}^{\text{dustTE}}$	0.337	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04103	$1.04104^{+0.00059}_{-0.00058}$
$100\theta_{\text{MC}}$	1.04085	$1.04085^{+0.00059}_{-0.00058}$	$A_{217}^{\text{dustTE}}$	1.668	$1.66^{+0.49}_{-0.48}$	$D_A/\text{Gpc}$	13.8957	$13.895^{+0.047}_{-0.047}$
$\tau$	0.0872	$0.087^{+0.035}_{-0.034}$	$c_{100}$	0.99819	$0.9982^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.78	$1059.80^{+0.64}_{-0.63}$
$\ln(10^{10} A_s)$	3.109	$3.108^{+0.069}_{-0.068}$	$c_{217}$	0.99603	$0.9960^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.34	$147.33^{+0.52}_{-0.52}$
$n_s$	0.9658	$0.9654^{+0.0083}_{-0.0082}$	$H_0$	67.56	$67.57^{+0.97}_{-0.94}$	$k_D$	0.14058	$0.14058^{+0.00062}_{-0.00063}$
$dn_s/d \ln k$	-0.0048	$-0.006^{+0.014}_{-0.014}$	$\Omega_\Lambda$	0.6884	$0.688^{+0.013}_{-0.013}$	$100\theta_D$	0.160826	$0.16082^{+0.00037}_{-0.00036}$
$y_{\text{cal}}$	1.00024	$1.0004^{+0.0049}_{-0.0050}$	$\Omega_m$	0.3116	$0.312^{+0.013}_{-0.013}$	$z_{\text{eq}}$	3383.1	$3383^{+48}_{-47}$
$A_{217}^{\text{CIB}}$	67.2	$64^{+10}_{-10}$	$\Omega_m h^2$	0.14221	$0.1422^{+0.0020}_{-0.0020}$	$k_{\text{eq}}$	0.010325	$0.01033^{+0.00015}_{-0.00014}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.06	—	$\Omega_m h^3$	0.09608	$0.09609^{+0.00061}_{-0.00060}$	$100\theta_{\text{eq}}$	0.8166	$0.8166^{+0.0090}_{-0.0090}$
$A_{143}^{\text{tSZ}}$	7.12	$5.2^{+3.6}_{-3.8}$	$\sigma_8$	0.8346	$0.834^{+0.027}_{-0.027}$	$100\theta_{s,\text{eq}}$	0.45111	$0.4511^{+0.0047}_{-0.0046}$
$A_{100}^{\text{PS}}$	258	$262^{+50}_{-60}$	$\sigma_8 \Omega_m^{0.5}$	0.4658	$0.465^{+0.017}_{-0.018}$	$r_{\text{drag}}/D_V(0.57)$	0.07156	$0.07157^{+0.00072}_{-0.00070}$
$A_{143}^{\text{PS}}$	40.2	$44^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6235	$0.623^{+0.021}_{-0.021}$	$H(0.57)$	92.995	$93.00^{+0.44}_{-0.42}$
$A_{143 \times 217}^{\text{PS}}$	34.7	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0153	$1.014^{+0.033}_{-0.033}$	$D_A(0.57)$	1388.2	$1388^{+13}_{-13}$
$A_{217}^{\text{PS}}$	97.7	$97^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.505	$2.503^{+0.076}_{-0.079}$	$F_{\text{AP}}(0.57)$	0.67605	$0.6760^{+0.0033}_{-0.0033}$
$A^{\text{kSZ}}$	0.00	$< 8.25$	$z_{\text{re}}$	10.77	$10.7^{+2.9}_{-3.1}$	$f\sigma_8(0.57)$	0.4852	$0.485^{+0.016}_{-0.016}$
$A_{100}^{\text{dustTT}}$	7.38	$7.4^{+3.6}_{-3.6}$	$10^9 A_s$	2.240	$2.24^{+0.16}_{-0.15}$	$\sigma_8(0.57)$	0.6208	$0.620^{+0.021}_{-0.020}$
$A_{143}^{\text{dustTT}}$	8.94	$8.9^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8812	$1.882^{+0.023}_{-0.023}$	$f_{2000}^{143}$	29.8	$30^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.0^{+8.2}_{-8.2}$	$D_{40}$	1228.3	$1228^{+37}_{-36}$	$f_{2000}^{143 \times 217}$	32.52	$33^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	81.8	$82^{+10}_{-10}$	$D_{220}$	5726	$5728^{+76}_{-76}$	$f_{2000}^{217}$	106.07	$106.3^{+3.9}_{-3.9}$
$A_{100}^{\text{dustEE}}$	0.0817	$0.082^{+0.011}_{-0.011}$	$D_{810}$	2535.7	$2536^{+27}_{-27}$	$\chi_{\text{lowTEB}}^2$	10495.9	$10496.5 (\nu: 3.8)$
$A_{100 \times 143}^{\text{dustEE}}$	0.0493	$0.0495^{+0.0097}_{-0.010}$	$D_{1420}$	814.0	$813.8^{+9.6}_{-9.8}$	$\chi_{\text{plik}}^2$	2432.3	$2451.7 (\nu: 24.2)$
$A_{100 \times 217}^{\text{dustEE}}$	0.0998	$0.099^{+0.065}_{-0.063}$	$D_{2000}$	230.13	$230.0^{+3.4}_{-3.4}$	$\chi_{6\text{DF}}^2$	0.037	$0.065 (\nu: 0.0)$
$A_{143}^{\text{dustEE}}$	0.1008	$0.101^{+0.014}_{-0.013}$	$n_{s,0.002}$	0.9813	$0.984^{+0.045}_{-0.043}$	$\chi_{\text{MGS}}^2$	1.16	$1.23 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dustEE}}$	0.223	$0.224^{+0.091}_{-0.091}$	$Y_P$	0.245375	$0.24538^{+0.00013}_{-0.00014}$	$\chi_{\text{DR11CMass}}^2$	2.55	$2.87 (\nu: 0.2)$
$A_{217}^{\text{dustEE}}$	0.650	$0.65^{+0.26}_{-0.26}$	$Y_P^{\text{BBN}}$	0.246701	$0.24670^{+0.00013}_{-0.00014}$	$\chi_{\text{DR11LOWZ}}^2$	0.75	$0.84 (\nu: 0.2)$
$A_{100}^{\text{dustTE}}$	0.140	$0.141^{+0.075}_{-0.077}$	$10^5 D/H$	2.599	$2.598^{+0.055}_{-0.055}$	$\chi_{\text{prior}}^2$	7.1	$19.5 (\nu: 15.3)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.057}_{-0.058}$	Age/Gyr	13.8007	$13.800^{+0.042}_{-0.042}$	$\chi_{\text{CMB}}^2$	12928.2	$12948.2 (\nu: 22.3)$
$A_{100 \times 217}^{\text{dustTE}}$	0.305	$0.30^{+0.17}_{-0.16}$	$z_*$	1089.904	$1089.90^{+0.48}_{-0.48}$	$\chi_{\text{BAO}}^2$	4.49	$5.00 (\nu: 0.4)$

Best-fit  $\chi_{\text{eff}}^2 = 12939.75$ ;  $\bar{\chi}_{\text{eff}}^2 = 12972.72$ ;  $R - 1 = 0.01477$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.04 MGS: 1.16 DR11CMass: 2.55 DR11LOWZ: 0.75 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.84 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2432.33

# 17.10 base\_nrun\_plikHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022307	$0.02231^{+0.00032}_{-0.00032}$	$A_{100 \times 217}^{\text{dustTE}}$	0.304	$0.30^{+0.17}_{-0.16}$	Age/Gyr	13.806	$13.805^{+0.051}_{-0.051}$
$\Omega_c h^2$	0.11960	$0.1196^{+0.0028}_{-0.0028}$	$A_{143}^{\text{dustTE}}$	0.153	$0.15^{+0.11}_{-0.10}$	$z_*$	1089.97	$1089.96^{+0.57}_{-0.58}$
$100\theta_{\text{MC}}$	1.04080	$1.04081^{+0.00064}_{-0.00062}$	$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.16}_{-0.16}$	$r_*$	144.58	$144.58^{+0.63}_{-0.63}$
$\tau$	0.0854	$0.085^{+0.036}_{-0.035}$	$A_{217}^{\text{dustTE}}$	1.658	$1.66^{+0.50}_{-0.49}$	$100\theta_*$	1.04098	$1.04100^{+0.00063}_{-0.00061}$
$\ln(10^{10} A_s)$	3.106	$3.105^{+0.071}_{-0.069}$	$c_{100}$	0.99820	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.889	$13.889^{+0.057}_{-0.058}$
$n_s$	0.9647	$0.9645^{+0.0097}_{-0.0096}$	$c_{217}$	0.99604	$0.9960^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.78	$1059.77^{+0.67}_{-0.63}$
$dn_s/d \ln k$	-0.0049	$-0.006^{+0.014}_{-0.014}$	$H_0$	67.40	$67.4^{+1.3}_{-1.2}$	$r_{\text{drag}}$	147.27	$147.26^{+0.63}_{-0.62}$
$y_{\text{cal}}$	1.00027	$1.0003^{+0.0049}_{-0.0049}$	$\Omega_\Lambda$	0.6862	$0.686^{+0.017}_{-0.018}$	$k_D$	0.14063	$0.14064^{+0.00067}_{-0.00067}$
$A_{217}^{\text{CIB}}$	67.8	$64^{+10}_{-10}$	$\Omega_m$	0.3138	$0.314^{+0.018}_{-0.017}$	$100\theta_D$	0.160837	$0.16084^{+0.00038}_{-0.00038}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.02	—	$\Omega_m h^2$	0.14255	$0.1426^{+0.0026}_{-0.0026}$	$z_{\text{eq}}$	3391	$3391^{+63}_{-63}$
$A_{143}^{\text{tSZ}}$	7.24	$5.2^{+3.7}_{-3.8}$	$\Omega_m h^3$	0.09608	$0.09609^{+0.00062}_{-0.00061}$	$k_{\text{eq}}$	0.010350	$0.01035^{+0.00019}_{-0.00019}$
$A_{100}^{\text{PS}}$	258	$263^{+50}_{-60}$	$\sigma_8$	0.8344	$0.834^{+0.027}_{-0.027}$	$100\theta_{\text{eq}}$	0.8150	$0.815^{+0.012}_{-0.012}$
$A_{143}^{\text{PS}}$	39.3	$45^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4674	$0.467^{+0.019}_{-0.019}$	$100\theta_{s,\text{eq}}$	0.4503	$0.4503^{+0.0061}_{-0.0061}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6245	$0.624^{+0.021}_{-0.022}$	$r_{\text{drag}}/D_V(0.57)$	0.07144	$0.07144^{+0.00096}_{-0.00094}$
$A_{217}^{\text{PS}}$	96.9	$97^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0163	$1.015^{+0.033}_{-0.033}$	$H(0.57)$	92.93	$92.94^{+0.56}_{-0.53}$
$A^{\text{kSZ}}$	0.01	$< 8.30$	$\langle d^2 \rangle^{1/2}$	2.508	$2.505^{+0.077}_{-0.079}$	$D_A(0.57)$	1390.3	$1390^{+17}_{-17}$
$A_{100}^{\text{dustTT}}$	7.44	$7.4^{+3.6}_{-3.6}$	$z_{\text{re}}$	10.63	$10.5^{+3.0}_{-3.3}$	$F_{\text{AP}}(0.57)$	0.67661	$0.6766^{+0.0044}_{-0.0044}$
$A_{143}^{\text{dustTT}}$	8.95	$8.9^{+3.6}_{-3.6}$	$10^9 A_s$	2.234	$2.23^{+0.16}_{-0.15}$	$f\sigma_8(0.57)$	0.4857	$0.485^{+0.016}_{-0.016}$
$A_{143 \times 217}^{\text{dustTT}}$	17.4	$17.0^{+8.3}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8828	$1.884^{+0.024}_{-0.024}$	$\sigma_8(0.57)$	0.6201	$0.620^{+0.021}_{-0.021}$
$A_{217}^{\text{dustTT}}$	81.5	$81^{+10}_{-10}$	$D_{40}$	1229.8	$1229^{+38}_{-37}$	$f_{2000}^{143}$	29.9	$30^{+6}_{-6}$
$A_{100}^{\text{dustEE}}$	0.0819	$0.082^{+0.011}_{-0.011}$	$D_{220}$	5726	$5727^{+76}_{-75}$	$f_{2000}^{143 \times 217}$	32.62	$33^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0495	$0.0494^{+0.0097}_{-0.010}$	$D_{810}$	2536.1	$2537^{+27}_{-27}$	$f_{2000}^{217}$	106.18	$106.3^{+4.0}_{-3.9}$
$A_{100 \times 217}^{\text{dustEE}}$	0.0996	$0.099^{+0.065}_{-0.063}$	$D_{1420}$	813.8	$813.7^{+9.6}_{-9.9}$	$\chi_{\text{lowTEB}}^2$	10495.8	$10496.5 (\nu: 3.8)$
$A_{143}^{\text{dustEE}}$	0.1008	$0.101^{+0.014}_{-0.014}$	$D_{2000}$	229.99	$229.9^{+3.4}_{-3.6}$	$\chi_{\text{plik}}^2$	2432.1	$2452.0 (\nu: 24.5)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.224^{+0.092}_{-0.091}$	$n_{s,0.002}$	0.9806	$0.983^{+0.045}_{-0.044}$	$\chi_{\text{JLA}}^2$	706.82	$706.89 (\nu: 0.0)$
$A_{217}^{\text{dustEE}}$	0.651	$0.65^{+0.25}_{-0.26}$	$Y_P$	0.245365	$0.24537^{+0.00014}_{-0.00015}$	$\chi_{\text{prior}}^2$	7.2	$19.5 (\nu: 15.3)$
$A_{100}^{\text{dustTE}}$	0.142	$0.140^{+0.074}_{-0.076}$	$Y_P^{\text{BBN}}$	0.246692	$0.24669^{+0.00014}_{-0.00015}$	$\chi_{\text{CMB}}^2$	12927.9	$12948.6 (\nu: 22.8)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.056}_{-0.058}$	$10^5 \text{D}/\text{H}$	2.603	$2.603^{+0.060}_{-0.060}$			

Best-fit  $\chi_{\text{eff}}^2 = 13641.96$ ;  $\bar{\chi}_{\text{eff}}^2 = 13674.92$ ;  $R - 1 = 0.01157$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.80 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2432.12 SN - JLA December\_2013: 706.82

### 17.11 base\_nrun\_plikHM\_TTTEEE\_lowTEB\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022269	$0.02228^{+0.00033}_{-0.00032}$	$A_{100 \times 217}^{\text{dustTE}}$	0.301	$0.31^{+0.16}_{-0.16}$	Age/Gyr	13.806	$13.805^{+0.054}_{-0.051}$
$\Omega_c h^2$	0.11926	$0.1192^{+0.0029}_{-0.0028}$	$A_{143}^{\text{dustTE}}$	0.154	$0.16^{+0.11}_{-0.11}$	$z_*$	1089.98	$1089.97^{+0.61}_{-0.59}$
$100\theta_{\text{MC}}$	1.04086	$1.04088^{+0.00061}_{-0.00063}$	$A_{143 \times 217}^{\text{dustTE}}$	0.338	$0.34^{+0.16}_{-0.16}$	$r_*$	144.70	$144.70^{+0.59}_{-0.62}$
$\tau$	0.0632	$0.063^{+0.028}_{-0.027}$	$A_{217}^{\text{dustTE}}$	1.66	$1.66^{+0.51}_{-0.49}$	$100\theta_*$	1.04106	$1.04108^{+0.00061}_{-0.00061}$
$\ln(10^{10} A_s)$	3.059	$3.060^{+0.050}_{-0.051}$	$c_{100}$	0.99815	$0.9981^{+0.0016}_{-0.0016}$	$D_A/\text{Gpc}$	13.899	$13.899^{+0.055}_{-0.058}$
$n_s$	0.9657	$0.9653^{+0.0095}_{-0.0094}$	$c_{217}$	0.99604	$0.9961^{+0.0029}_{-0.0028}$	$z_{\text{drag}}$	1059.67	$1059.66^{+0.65}_{-0.64}$
$dn_s/d \ln k$	-0.0007	$-0.002^{+0.013}_{-0.013}$	$H_0$	67.51	$67.5^{+1.3}_{-1.3}$	$r_{\text{drag}}$	147.40	$147.40^{+0.58}_{-0.62}$
$y_{\text{cal}}$	1.0000	$1.0000^{+0.0051}_{-0.0051}$	$\Omega_\Lambda$	0.6881	$0.688^{+0.018}_{-0.018}$	$k_D$	0.14047	$0.14047^{+0.00066}_{-0.00066}$
$A_{217}^{\text{CIB}}$	67.7	$65^{+10}_{-10}$	$\Omega_m$	0.3119	$0.312^{+0.018}_{-0.018}$	$100\theta_D$	0.160912	$0.16091^{+0.00039}_{-0.00039}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.03	—	$\Omega_m h^2$	0.14217	$0.1422^{+0.0028}_{-0.0026}$	$z_{\text{eq}}$	3382	$3382^{+66}_{-62}$
$A_{143}^{\text{tSZ}}$	7.30	$5.1^{+3.6}_{-3.9}$	$\Omega_m h^3$	0.09598	$0.09600^{+0.00059}_{-0.00058}$	$k_{\text{eq}}$	0.010323	$0.01032^{+0.00020}_{-0.00019}$
$A_{100}^{\text{PS}}$	258	$263^{+60}_{-50}$	$\sigma_8$	0.8153	$0.815^{+0.017}_{-0.018}$	$100\theta_{\text{eq}}$	0.8166	$0.817^{+0.012}_{-0.012}$
$A_{143}^{\text{PS}}$	39.5	$44^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4553	$0.455^{+0.014}_{-0.014}$	$100\theta_{s,\text{eq}}$	0.4512	$0.4513^{+0.0062}_{-0.0063}$
$A_{143 \times 217}^{\text{PS}}$	33.7	$39^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6093	$0.609^{+0.013}_{-0.014}$	$r_{\text{drag}}/D_V(0.57)$	0.07155	$0.07157^{+0.00095}_{-0.00098}$
$A_{217}^{\text{PS}}$	96.9	$96^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9922	$0.992^{+0.020}_{-0.022}$	$H(0.57)$	92.95	$92.97^{+0.56}_{-0.56}$
$A^{\text{kSZ}}$	0.0	—	$\langle d^2 \rangle^{1/2}$	2.454	$2.452^{+0.051}_{-0.052}$	$D_A(0.57)$	1389.0	$1389^{+17}_{-18}$
$A_{100}^{\text{dustTT}}$	7.47	$7.5^{+3.5}_{-3.6}$	$z_{\text{re}}$	8.58	$8.5^{+2.5}_{-2.7}$	$F_{\text{AP}}(0.57)$	0.67614	$0.6761^{+0.0045}_{-0.0046}$
$A_{143}^{\text{dustTT}}$	9.09	$9.0^{+3.6}_{-3.4}$	$10^9 A_s$	2.131	$2.13^{+0.11}_{-0.11}$	$f\sigma_8(0.57)$	0.4741	$0.4738^{+0.0098}_{-0.010}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+7.9}_{-8.3}$	$10^9 A_s e^{-2\tau}$	1.8780	$1.878^{+0.024}_{-0.024}$	$\sigma_8(0.57)$	0.6064	$0.606^{+0.014}_{-0.015}$
$A_{217}^{\text{dustTT}}$	81.8	$82^{+10}_{-10}$	$D_{40}$	1228.1	$1227^{+39}_{-37}$	$f_{2000}^{143}$	30.0	$30^{+6}_{-6}$
$A_{100}^{\text{dustEE}}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5722	$5723^{+79}_{-76}$	$f_{2000}^{143 \times 217}$	32.71	$33^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0491	$0.0491^{+0.0096}_{-0.010}$	$D_{810}$	2534.0	$2534^{+27}_{-27}$	$f_{2000}^{217}$	106.16	$106.3^{+3.9}_{-3.9}$
$A_{100 \times 217}^{\text{dustEE}}$	0.098	$0.100^{+0.066}_{-0.066}$	$D_{1420}$	814.6	$814.2^{+9.6}_{-10}$	$\chi^2_{\text{lensing}}$	9.86	10.6 ( $\nu$ : 1.9)
$A_{143}^{\text{dustEE}}$	0.1007	$0.100^{+0.014}_{-0.014}$	$D_{2000}$	230.00	$229.8^{+3.5}_{-3.6}$	$\chi^2_{\text{lowTEB}}$	10495.06	10495.6 ( $\nu$ : 2.6)
$A_{143 \times 217}^{\text{dustEE}}$	0.226	$0.224^{+0.088}_{-0.090}$	$n_{s,0.002}$	0.9681	$0.972^{+0.041}_{-0.042}$	$\chi^2_{\text{plik}}$	2435.1	2454.4 ( $\nu$ : 24.6)
$A_{217}^{\text{dustEE}}$	0.655	$0.65^{+0.26}_{-0.26}$	$Y_P$	0.245348	$0.24535^{+0.00015}_{-0.00015}$	$\chi^2_{\text{prior}}$	7.1	19.5 ( $\nu$ : 15.6)
$A_{100}^{\text{dustTE}}$	0.140	$0.141^{+0.076}_{-0.080}$	$Y_P^{\text{BBN}}$	0.246675	$0.24668^{+0.00015}_{-0.00015}$	$\chi^2_{\text{CMB}}$	12940.0	12960.6 ( $\nu$ : 23.8)
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.132^{+0.055}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.610	$2.609^{+0.062}_{-0.062}$			

Best-fit  $\chi^2_{\text{eff}} = 12947.16$ ;  $\bar{\chi}^2_{\text{eff}} = 12980.06$ ;  $R - 1 = 0.03377$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.86 lowl\_SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10495.06 plik\_dx11dr2\_HM\_v18.TTTEEE: 2435.13

# 17.12 base\_nrun\_plikHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022322	$0.02232^{+0.00032}_{-0.00032}$	$A_{100 \times 217}^{\text{dustTE}}$	0.304	$0.30^{+0.17}_{-0.16}$	Age/Gyr	13.804	$13.804^{+0.051}_{-0.052}$
$\Omega_c h^2$	0.11953	$0.1196^{+0.0029}_{-0.0028}$	$A_{143}^{\text{dustTE}}$	0.155	$0.15^{+0.11}_{-0.10}$	$z_*$	1089.94	$1089.95^{+0.58}_{-0.58}$
$100\theta_{\text{MC}}$	1.04080	$1.04082^{+0.00064}_{-0.00063}$	$A_{143 \times 217}^{\text{dustTE}}$	0.337	$0.34^{+0.16}_{-0.16}$	$r_*$	144.59	$144.59^{+0.63}_{-0.64}$
$\tau$	0.0863	$0.085^{+0.036}_{-0.035}$	$A_{217}^{\text{dustTE}}$	1.658	$1.66^{+0.50}_{-0.49}$	$100\theta_*$	1.04099	$1.04101^{+0.00063}_{-0.00062}$
$\ln(10^{10} A_s)$	3.108	$3.106^{+0.072}_{-0.069}$	$c_{100}$	0.99820	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.889	$13.889^{+0.059}_{-0.059}$
$n_s$	0.9649	$0.9646^{+0.0098}_{-0.0097}$	$c_{217}$	0.99607	$0.9960^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.78	$1059.78^{+0.66}_{-0.64}$
$dn_s/d \ln k$	-0.0053	$-0.006^{+0.014}_{-0.014}$	$H_0$	67.44	$67.4^{+1.3}_{-1.3}$	$r_{\text{drag}}$	147.27	$147.27^{+0.63}_{-0.63}$
$y_{\text{cal}}$	1.00021	$1.0003^{+0.0049}_{-0.0049}$	$\Omega_\Lambda$	0.6867	$0.686^{+0.017}_{-0.018}$	$k_D$	0.14064	$0.14064^{+0.00067}_{-0.00068}$
$A_{217}^{\text{CIB}}$	67.7	$64^{+10}_{-10}$	$\Omega_m$	0.3133	$0.314^{+0.018}_{-0.017}$	$100\theta_D$	0.160822	$0.16083^{+0.00038}_{-0.00037}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.04	—	$\Omega_m h^2$	0.14250	$0.1425^{+0.0027}_{-0.0026}$	$z_{\text{eq}}$	3390	$3390^{+64}_{-63}$
$A_{143}^{\text{tSZ}}$	7.12	$5.2^{+3.7}_{-3.8}$	$\Omega_m h^3$	0.09610	$0.09610^{+0.00062}_{-0.00061}$	$k_{\text{eq}}$	0.010346	$0.01035^{+0.00020}_{-0.00019}$
$A_{100}^{\text{PS}}$	259	$263^{+50}_{-60}$	$\sigma_8$	0.8347	$0.834^{+0.027}_{-0.027}$	$100\theta_{\text{eq}}$	0.8153	$0.815^{+0.012}_{-0.012}$
$A_{143}^{\text{PS}}$	40.0	$45^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4672	$0.467^{+0.019}_{-0.020}$	$100\theta_{s,\text{eq}}$	0.4504	$0.4504^{+0.0063}_{-0.0062}$
$A_{143 \times 217}^{\text{PS}}$	34	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6245	$0.624^{+0.021}_{-0.022}$	$r_{\text{drag}}/D_V(0.57)$	0.07146	$0.07146^{+0.00099}_{-0.00095}$
$A_{217}^{\text{PS}}$	97.3	$97^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0164	$1.015^{+0.033}_{-0.034}$	$H(0.57)$	92.95	$92.95^{+0.57}_{-0.54}$
$A^{\text{kSZ}}$	0.00	$< 8.30$	$\langle d^2 \rangle^{1/2}$	2.508	$2.505^{+0.077}_{-0.079}$	$D_A(0.57)$	1389.7	$1390^{+17}_{-17}$
$A_{100}^{\text{dustTT}}$	7.44	$7.4^{+3.6}_{-3.6}$	$z_{\text{re}}$	10.70	$10.5^{+3.0}_{-3.3}$	$F_{\text{AP}}(0.57)$	0.67649	$0.6765^{+0.0045}_{-0.0044}$
$A_{143}^{\text{dustTT}}$	8.93	$8.9^{+3.6}_{-3.6}$	$10^9 A_s$	2.237	$2.23^{+0.17}_{-0.15}$	$f\sigma_8(0.57)$	0.4858	$0.485^{+0.016}_{-0.016}$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.0^{+8.3}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8825	$1.883^{+0.025}_{-0.025}$	$\sigma_8(0.57)$	0.6205	$0.620^{+0.021}_{-0.021}$
$A_{217}^{\text{dustTT}}$	81.6	$81^{+10}_{-10}$	$D_{40}$	1228.6	$1229^{+38}_{-37}$	$f_{2000}^{143}$	30.0	$30^{+6}_{-6}$
$A_{100}^{\text{dustEE}}$	0.0817	$0.082^{+0.011}_{-0.011}$	$D_{220}$	5726	$5728^{+76}_{-76}$	$f_{2000}^{143 \times 217}$	32.68	$33^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0493	$0.0494^{+0.0097}_{-0.010}$	$D_{810}$	2535.9	$2537^{+27}_{-27}$	$f_{2000}^{217}$	106.21	$106.3^{+4.0}_{-4.0}$
$A_{100 \times 217}^{\text{dustEE}}$	0.0998	$0.099^{+0.065}_{-0.063}$	$D_{1420}$	813.7	$813.7^{+9.6}_{-9.9}$	$\chi_{\text{lowTEB}}^2$	10495.7	$10496.5 (\nu: 3.8)$
$A_{143}^{\text{dustEE}}$	0.1006	$0.101^{+0.014}_{-0.014}$	$D_{2000}$	229.98	$229.9^{+3.4}_{-3.6}$	$\chi_{\text{plik}}^2$	2432.4	$2452.1 (\nu: 24.6)$
$A_{143 \times 217}^{\text{dustEE}}$	0.223	$0.224^{+0.092}_{-0.091}$	$n_{s,0.002}$	0.9821	$0.983^{+0.045}_{-0.044}$	$\chi_{\text{H070p6}}^2$	0.90	$0.94 (\nu: 0.1)$
$A_{217}^{\text{dustEE}}$	0.653	$0.65^{+0.25}_{-0.26}$	$Y_P$	0.245371	$0.24537^{+0.00014}_{-0.00015}$	$\chi_{\text{prior}}^2$	7.0	$19.5 (\nu: 15.3)$
$A_{100}^{\text{dustTE}}$	0.141	$0.140^{+0.074}_{-0.076}$	$Y_P^{\text{BBN}}$	0.246698	$0.24669^{+0.00014}_{-0.00015}$	$\chi_{\text{CMB}}^2$	12928.1	$12948.6 (\nu: 22.9)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.131^{+0.056}_{-0.058}$	$10^5 \text{D}/\text{H}$	2.600	$2.602^{+0.061}_{-0.061}$			

Best-fit  $\chi_{\text{eff}}^2 = 12936.06$ ;  $\bar{\chi}_{\text{eff}}^2 = 12969.03$ ;  $R - 1 = 0.01164$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.74 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2432.38 Hubble - H070p6: 0.90

### 17.13 base\_nrun\_plikHM\_TTTEEE\_lowTEB\_post\_lensing\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022327	$0.02232^{+0.00030}_{-0.00028}$	$A_{143 \times 217}^{\text{dustTE}}$	0.337	$0.34^{+0.15}_{-0.16}$	$D_A/\text{Gpc}$	13.9092	$13.908^{+0.044}_{-0.045}$
$\Omega_c h^2$	0.11866	$0.1187^{+0.0020}_{-0.0020}$	$A_{217}^{\text{dustTE}}$	1.662	$1.66^{+0.49}_{-0.49}$	$z_{\text{drag}}$	1059.74	$1059.72^{+0.64}_{-0.62}$
$100\theta_{\text{MC}}$	1.04093	$1.04095^{+0.00056}_{-0.00059}$	$c_{100}$	0.99817	$0.9981^{+0.0016}_{-0.0016}$	$r_{\text{drag}}$	147.495	$147.49^{+0.47}_{-0.50}$
$\tau$	0.0662	$0.067^{+0.024}_{-0.024}$	$c_{217}$	0.99604	$0.9961^{+0.0029}_{-0.0028}$	$k_D$	0.14041	$0.14041^{+0.00059}_{-0.00061}$
$\ln(10^{10} A_s)$	3.0640	$3.065^{+0.045}_{-0.046}$	$H_0$	67.79	$67.77^{+0.93}_{-0.92}$	$100\theta_D$	0.160863	$0.16088^{+0.00037}_{-0.00035}$
$n_s$	0.9669	$0.9666^{+0.0081}_{-0.0079}$	$\Omega_\Lambda$	0.6918	$0.691^{+0.012}_{-0.013}$	$z_{\text{eq}}$	3369.1	$3371^{+45}_{-46}$
$dn_s/d \ln k$	-0.0007	$-0.002^{+0.013}_{-0.013}$	$\Omega_m$	0.3082	$0.309^{+0.013}_{-0.012}$	$k_{\text{eq}}$	0.010283	$0.01029^{+0.00014}_{-0.00014}$
$y_{\text{cal}}$	1.0000	$1.0001^{+0.0051}_{-0.0049}$	$\Omega_m h^2$	0.14163	$0.1417^{+0.0019}_{-0.0019}$	$100\theta_{\text{eq}}$	0.8191	$0.8189^{+0.0088}_{-0.0086}$
$A_{217}^{\text{CIB}}$	67.7	$64^{+10}_{-10}$	$\Omega_m h^3$	0.09602	$0.09602^{+0.00059}_{-0.00057}$	$100\theta_{s,\text{eq}}$	0.45246	$0.4523^{+0.0045}_{-0.0044}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.02	—	$\sigma_8$	0.8153	$0.816^{+0.017}_{-0.017}$	$r_{\text{drag}}/D_V(0.57)$	0.07176	$0.07174^{+0.00070}_{-0.00068}$
$A_{143}^{\text{tSZ}}$	7.35	$5.2^{+3.5}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	0.4526	$0.453^{+0.012}_{-0.012}$	$H(0.57)$	93.074	$93.07^{+0.42}_{-0.42}$
$A_{100}^{\text{PS}}$	257	$263^{+60}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6075	$0.608^{+0.013}_{-0.014}$	$D_A(0.57)$	1385.2	$1386^{+12}_{-12}$
$A_{143}^{\text{PS}}$	38.5	$44^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9903	$0.991^{+0.020}_{-0.021}$	$F_{\text{AP}}(0.57)$	0.67518	$0.6753^{+0.0032}_{-0.0032}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.451	$2.450^{+0.051}_{-0.052}$	$f\sigma_8(0.57)$	0.4732	$0.4734^{+0.0098}_{-0.010}$
$A_{217}^{\text{PS}}$	96.6	$96^{+20}_{-20}$	$z_{\text{re}}$	8.84	$8.8^{+2.2}_{-2.4}$	$\sigma_8(0.57)$	0.6074	$0.607^{+0.014}_{-0.014}$
$A^{\text{kSZ}}$	0.0	—	$10^9 A_s$	2.141	$2.144^{+0.099}_{-0.096}$	$f_{2000}^{143}$	29.7	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.55	$7.5^{+3.6}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8757	$1.876^{+0.023}_{-0.023}$	$f_{2000}^{143 \times 217}$	32.44	$33^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.05	$9.0^{+3.6}_{-3.4}$	$D_{40}$	1227.0	$1225^{+37}_{-37}$	$f_{2000}^{217}$	105.99	$106.2^{+3.9}_{-3.8}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.2^{+7.9}_{-8.5}$	$D_{220}$	5728	$5726^{+78}_{-77}$	$\chi^2_{\text{lensing}}$	9.60	$10.4 (\nu: 1.8)$
$A_{217}^{\text{dustTT}}$	81.7	$82^{+20}_{-10}$	$D_{810}$	2533.8	$2534^{+27}_{-27}$	$\chi^2_{\text{lowTEB}}$	10494.96	$10495.3 (\nu: 2.3)$
$A_{100}^{\text{dustEE}}$	0.0818	$0.082^{+0.011}_{-0.011}$	$D_{1420}$	815.0	$814.6^{+9.5}_{-9.6}$	$\chi^2_{\text{plik}}$	2435.5	$2454.4 (\nu: 24.9)$
$A_{100 \times 143}^{\text{dustEE}}$	0.0493	$0.0494^{+0.0097}_{-0.010}$	$D_{2000}$	230.21	$230.0^{+3.3}_{-3.5}$	$\chi^2_{\text{H070p6}}$	0.713	$0.74 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.100^{+0.066}_{-0.065}$	$n_{s,0.002}$	0.9692	$0.973^{+0.041}_{-0.040}$	$\chi^2_{\text{JLA}}$	706.660	$706.70 (\nu: 0.0)$
$A_{143}^{\text{dustEE}}$	0.1005	$0.101^{+0.014}_{-0.013}$	$Y_P$	0.245374	$0.24537^{+0.00013}_{-0.00013}$	$\chi^2_{6\text{DF}}$	0.010	$0.038 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustEE}}$	0.223	$0.224^{+0.089}_{-0.090}$	$Y_P^{\text{BBN}}$	0.246700	$0.24669^{+0.00013}_{-0.00013}$	$\chi^2_{\text{MGS}}$	1.41	$1.44 (\nu: 0.1)$
$A_{217}^{\text{dustEE}}$	0.651	$0.65^{+0.26}_{-0.26}$	$10^5 D/H$	2.599	$2.601^{+0.054}_{-0.056}$	$\chi^2_{\text{DR11CMAS}}$	2.41	$2.71 (\nu: 0.1)$
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.076}_{-0.082}$	$\text{Age/Gyr}$	13.7959	$13.797^{+0.042}_{-0.040}$	$\chi^2_{\text{DR11LOWZ}}$	0.48	$0.59 (\nu: 0.1)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.132^{+0.055}_{-0.059}$	$z_*$	1089.856	$1089.88^{+0.48}_{-0.47}$	$\chi^2_{\text{prior}}$	7.3	$19.6 (\nu: 16.0)$
$A_{100 \times 217}^{\text{dustTE}}$	0.304	$0.31^{+0.16}_{-0.16}$	$r_*$	144.811	$144.80^{+0.46}_{-0.47}$	$\chi^2_{\text{CMB}}$	12940.0	$12960.1 (\nu: 23.3)$
$A_{143}^{\text{dustTE}}$	0.154	$0.15^{+0.11}_{-0.11}$	$100\theta_*$	1.04112	$1.04114^{+0.00056}_{-0.00058}$	$\chi^2_{\text{BAO}}$	4.31	$4.79 (\nu: 0.2)$

Best-fit  $\chi^2_{\text{eff}} = 13659.02$ ;  $\bar{\chi}^2_{\text{eff}} = 13691.95$ ;  $R - 1 = 0.05324$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMAS: 2.41 DR11LOWZ: 0.48 CMB - smica\_g30\_ft1\_full\_pp: 9.60 lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.96 plik\_dx11dr2\_HM\_v18\_TTT

## 17.14 base\_nrun\_plikHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00033}_{-0.00032}$	$A_{100 \times 217}^{\text{dust}TE}$	$0.30^{+0.17}_{-0.16}$	Age/Gyr	$13.808^{+0.052}_{-0.051}$
$\Omega_c h^2$	$0.1198^{+0.0029}_{-0.0029}$	$A_{143}^{\text{dust}TE}$	$0.15^{+0.11}_{-0.10}$	$z_*$	$1090.00^{+0.60}_{-0.59}$
$100\theta_{\text{MC}}$	$1.04078^{+0.00064}_{-0.00062}$	$A_{143 \times 217}^{\text{dust}TE}$	$0.34^{+0.16}_{-0.16}$	$r_*$	$144.54^{+0.65}_{-0.63}$
$\tau$	$0.084^{+0.035}_{-0.035}$	$A_{217}^{\text{dust}TE}$	$1.67^{+0.50}_{-0.49}$	$100\theta_*$	$1.04097^{+0.00063}_{-0.00061}$
$\ln(10^{10} A_s)$	$3.104^{+0.069}_{-0.069}$	$c_{100}$	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	$13.885^{+0.059}_{-0.059}$
$n_s$	$0.9640^{+0.0097}_{-0.0098}$	$c_{217}$	$0.9960^{+0.0029}_{-0.0028}$	$z_{\text{drag}}$	$1059.75^{+0.65}_{-0.65}$
$dn_s/d \ln k$	$-0.006^{+0.014}_{-0.014}$	$H_0$	$67.3^{+1.3}_{-1.3}$	$r_{\text{drag}}$	$147.23^{+0.63}_{-0.63}$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0049}$	$\Omega_\Lambda$	$0.685^{+0.018}_{-0.018}$	$k_D$	$0.14067^{+0.00068}_{-0.00067}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$\Omega_m$	$0.315^{+0.018}_{-0.018}$	$100\theta_D$	$0.16085^{+0.00038}_{-0.00038}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\Omega_m h^2$	$0.1428^{+0.0027}_{-0.0027}$	$z_{\text{eq}}$	$3396^{+65}_{-65}$
$A_{143}^{\text{tSZ}}$	$5.1^{+3.7}_{-3.8}$	$\Omega_m h^3$	$0.09609^{+0.00062}_{-0.00061}$	$k_{\text{eq}}$	$0.01036^{+0.00020}_{-0.00020}$
$A_{100}^{\text{PS}}$	$263^{+50}_{-60}$	$\sigma_8$	$0.834^{+0.027}_{-0.026}$	$100\theta_{\text{eq}}$	$0.814^{+0.012}_{-0.012}$
$A_{143}^{\text{PS}}$	$45^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	$0.468^{+0.019}_{-0.019}$	$100\theta_{\text{s,eq}}$	$0.4499^{+0.0063}_{-0.0062}$
$A_{143 \times 217}^{\text{PS}}$	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	$0.625^{+0.021}_{-0.021}$	$r_{\text{drag}}/D_V(0.57)$	$0.07138^{+0.00099}_{-0.00095}$
$A_{217}^{\text{PS}}$	$97^{+20}_{-20}$	$\sigma_8/h^{0.5}$	$1.016^{+0.033}_{-0.032}$	$H(0.57)$	$92.90^{+0.58}_{-0.54}$
$A^{\text{kSZ}}$	$< 8.31$	$\langle d^2 \rangle^{1/2}$	$2.508^{+0.076}_{-0.075}$	$D_A(0.57)$	$1391^{+17}_{-18}$
$A_{100}^{\text{dust}TT}$	$7.4^{+3.6}_{-3.6}$	$z_{\text{re}}$	$10.5^{+3.0}_{-3.0}$	$F_{\text{AP}}(0.57)$	$0.6769^{+0.0045}_{-0.0045}$
$A_{143}^{\text{dust}TT}$	$8.9^{+3.6}_{-3.6}$	$10^9 A_s$	$2.23^{+0.15}_{-0.15}$	$f\sigma_8(0.57)$	$0.486^{+0.016}_{-0.015}$
$A_{143 \times 217}^{\text{dust}TT}$	$17.0^{+8.3}_{-8.2}$	$10^9 A_s e^{-2\tau}$	$1.884^{+0.025}_{-0.025}$	$\sigma_8(0.57)$	$0.620^{+0.020}_{-0.020}$
$A_{217}^{\text{dust}TT}$	$81^{+10}_{-10}$	$D_{40}$	$1230^{+38}_{-37}$	$f_{2000}^{143}$	$30^{+6}_{-6}$
$A_{100}^{\text{dust}EE}$	$0.082^{+0.011}_{-0.011}$	$D_{220}$	$5727^{+76}_{-75}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A_{100 \times 143}^{\text{dust}EE}$	$0.0493^{+0.0097}_{-0.010}$	$D_{810}$	$2537^{+27}_{-27}$	$f_{2000}^{217}$	$106.4^{+4.0}_{-4.0}$
$A_{100 \times 217}^{\text{dust}EE}$	$0.099^{+0.065}_{-0.063}$	$D_{1420}$	$813.5^{+9.5}_{-9.9}$	$\chi_{\text{lowTEB}}^2$	$10496.5 (\nu: 3.7)$
$A_{143}^{\text{dust}EE}$	$0.101^{+0.014}_{-0.014}$	$D_{2000}$	$229.8^{+3.5}_{-3.5}$	$\chi_{\text{plik}}^2$	$2452.1 (\nu: 24.3)$
$A_{143 \times 217}^{\text{dust}EE}$	$0.224^{+0.092}_{-0.090}$	$n_{\text{s},0.002}$	$0.983^{+0.045}_{-0.044}$	$\chi_{\text{prior}}^2$	$19.4 (\nu: 15.3)$
$A_{217}^{\text{dust}EE}$	$0.65^{+0.25}_{-0.26}$	$Y_{\text{P}}$	$0.24536^{+0.00014}_{-0.00015}$	$\chi_{\text{CMB}}^2$	$12948.5 (\nu: 22.6)$
$A_{100}^{\text{dust}TE}$	$0.140^{+0.074}_{-0.076}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24668^{+0.00015}_{-0.00015}$		
$A_{100 \times 143}^{\text{dust}TE}$	$0.131^{+0.056}_{-0.058}$	$10^5 \text{D/H}$	$2.606^{+0.061}_{-0.061}$		

$$\bar{\chi}_{\text{eff}}^2 = 12968.00; R - 1 = 0.01051$$



### 17.15 base\_nrun\_CamSpecHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02233	$0.02237^{+0.00055}_{-0.00051}$ (+0.1 $\sigma$ )	$\beta_1^1$	-0.01	$-0.1^{+1.9}_{-2.0}$	$r_*$	144.56	$144.61^{+0.99}_{-0.99}$ (+0.1 $\sigma$ )
$\Omega_c h^2$	0.11961	$0.1193^{+0.0044}_{-0.0044}$ (-0.1 $\sigma$ )	$H_0$	67.47	$67.6^{+2.0}_{-2.0}$ (+0.1 $\sigma$ )	$100\theta_*$	1.04115	$1.04119^{+0.00094}_{-0.00095}$ (+0.2 $\sigma$ )
$100\theta_{MC}$	1.04096	$1.04099^{+0.00096}_{-0.00097}$ (+0.1 $\sigma$ )	$\Omega_\Lambda$	0.6868	$0.688^{+0.026}_{-0.028}$ (+0.1 $\sigma$ )	$z_{drag}$	1059.82	$1059.9^{+1.1}_{-1.0}$ (-0.0 $\sigma$ )
$\tau$	0.0854	$0.089^{+0.045}_{-0.043}$ (+0.0 $\sigma$ )	$\Omega_m$	0.3132	$0.312^{+0.028}_{-0.026}$ (-0.1 $\sigma$ )	$r_{drag}$	147.24	$147.27^{+0.99}_{-0.99}$ (+0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.103	$3.110^{+0.088}_{-0.083}$ (-0.0 $\sigma$ )	$\Omega_m h^2$	0.14258	$0.1423^{+0.0042}_{-0.0041}$ (-0.1 $\sigma$ )	$k_D$	0.14069	$0.1407^{+0.0011}_{-0.0011}$ (-0.1 $\sigma$ )
$n_s$	0.9657	$0.968^{+0.013}_{-0.013}$ (+0.4 $\sigma$ )	$\Omega_m h^3$	0.09620	$0.0962^{+0.0010}_{-0.0010}$ (+0.0 $\sigma$ )	$100\theta_D$	0.16081	$0.16078^{+0.00062}_{-0.00062}$ (-0.1 $\sigma$ )
$dn_s/d \ln k$	-0.0084	$-0.008^{+0.016}_{-0.016}$ (+0.1 $\sigma$ )	$\sigma_8$	0.8328	$0.835^{+0.032}_{-0.031}$ (-0.0 $\sigma$ )	$z_{eq}$	3392	$3386^{+100}_{-99}$ (-0.1 $\sigma$ )
$y_{cal}$	0.9999	$1.0003^{+0.0050}_{-0.0050}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4661	$0.466^{+0.027}_{-0.027}$ (-0.1 $\sigma$ )	$100\theta_{eq}$	0.8151	$0.816^{+0.019}_{-0.019}$ (+0.1 $\sigma$ )
$A_{100}^{PS}$	255.2	$248^{+40}_{-50}$ (-0.5 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6230	$0.624^{+0.027}_{-0.027}$ (-0.1 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07148	$0.0716^{+0.0015}_{-0.0015}$ (+0.1 $\sigma$ )
$A_{143}^{PS}$	36.8	$40^{+20}_{-20}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0139	$1.016^{+0.040}_{-0.041}$ (-0.1 $\sigma$ )	$H(0.57)$	92.98	$93.07^{+0.93}_{-0.87}$ (+0.1 $\sigma$ )
$A_{217}^{PS}$	92.4	$97^{+30}_{-30}$ (+0.0 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.493	$2.497^{+0.089}_{-0.091}$ (-0.2 $\sigma$ )	$D_A(0.57)$	1389.2	$1387^{+27}_{-27}$ (-0.1 $\sigma$ )
$A_{217}^{CIB}$	48.6	$47^{+10}_{-10}$ (-2.7 $\sigma$ )	$z_{re}$	10.62	$10.8^{+3.8}_{-3.8}$ (+0.0 $\sigma$ )	$F_{AP}(0.57)$	0.6765	$0.6760^{+0.0070}_{-0.0068}$ (-0.1 $\sigma$ )
$A_{143}^{tSZ}$	2.42	< 6.51 (-0.9 $\sigma$ )	$10^9 A_s$	2.227	$2.24^{+0.20}_{-0.18}$ (-0.0 $\sigma$ )	$f\sigma_8(0.57)$	0.4847	$0.486^{+0.019}_{-0.020}$ (-0.1 $\sigma$ )
$r_{143 \times 217}^{PS}$	0.387	$0.51^{+0.22}_{-0.20}$	$10^9 A_s e^{-2\tau}$	1.8770	$1.878^{+0.028}_{-0.028}$ (-0.4 $\sigma$ )	$\sigma_8(0.57)$	0.6191	$0.622^{+0.026}_{-0.024}$ (+0.0 $\sigma$ )
$\xi^{tSZ \times CIB}$	0.00	—	$D_{40}$	1213.4	$1215^{+41}_{-40}$ (-0.3 $\sigma$ )	$Y_P^{BBN}$	0.246285	$0.24630^{+0.00023}_{-0.00022}$ (-3.3 $\sigma$ )
$A^{kSZ}$	6.7	—	$D_{220}$	5695	$5700^{+82}_{-81}$ (-0.5 $\sigma$ )	$f_{2000}^{143}$	30.8	$29^{+6}_{-6}$ (-0.5 $\sigma$ )
$A_{100}^{dust}$	0.986	$0.99^{+0.38}_{-0.38}$	$D_{810}$	2529.0	$2532^{+28}_{-27}$ (-0.3 $\sigma$ )	$f_{2000}^{217}$	107.59	$106.8^{+4.2}_{-4.2}$ (+0.1 $\sigma$ )
$A_{143}^{dust}$	1.049	$1.02^{+0.35}_{-0.35}$	$D_{1420}$	811.4	$814^{+10}_{-10}$ (+0.0 $\sigma$ )	$f_{2000}^{143 \times 217}$	32.87	$32^{+5}_{-5}$ (-0.4 $\sigma$ )
$A_{217}^{dust}$	1.210	$1.21^{+0.23}_{-0.23}$	$n_{s,0.002}$	0.993	$0.992^{+0.054}_{-0.052}$ (+0.0 $\sigma$ )	$\chi_{lowTEB}^2$	10494.24	$10495.9(\nu: 3.6)$ (-0.1 $\sigma$ )
$A_{143 \times 217}^{dust}$	0.951	$0.98^{+0.35}_{-0.36}$	$Y_P$	0.244954	$0.24498^{+0.00023}_{-0.00022}$ (-3.4 $\sigma$ )	$\chi_{CamSpec}^2$	8045.3	$8060.7(\nu: 18.6)$
$c_{100}$	0.99657	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	Age/Gyr	13.799	$13.792^{+0.083}_{-0.086}$ (-0.1 $\sigma$ )	$\chi_{prior}^2$	3.8	$8.4(\nu: 6.1)$ (+0.3 $\sigma$ )
$c_{217}$	0.99762	$0.9973^{+0.0035}_{-0.0035}$ (+0.9 $\sigma$ )	$z_*$	1089.92	$1089.85^{+0.92}_{-0.93}$ (-0.1 $\sigma$ )	$\chi_{CMB}^2$	18539.6	$18556.6(\nu: 17.7)$ (+1277.1 $\sigma$ )

Best-fit  $\chi_{eff}^2 = 18543.36$ ;  $\Delta\chi_{eff}^2 = 7282.25$ ;  $\bar{\chi}_{eff}^2 = 18564.93$ ;  $\Delta\bar{\chi}_{eff}^2 = 7282.86$ ;  $R - 1 = 0.00700$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10494.24 ( $\Delta$  -0.77) CamSpec like.v9.10CMH\_unified: 8045.33

# 17.16 base\_nrun\_CamSpecHM\_TT\_lowTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00046}_{-0.00045} \quad (-0.0\sigma)$	$\Omega_\Lambda$	$0.691^{+0.015}_{-0.015} \quad (+0.1\sigma)$	$k_D$	$0.14063^{+0.00096}_{-0.00096} \quad (-0.0\sigma)$
$\Omega_c h^2$	$0.1189^{+0.0025}_{-0.0025} \quad (-0.1\sigma)$	$\Omega_m$	$0.309^{+0.015}_{-0.015} \quad (-0.1\sigma)$	$100\theta_D$	$0.16076^{+0.00060}_{-0.00059} \quad (-0.0\sigma)$
$100\theta_{MC}$	$1.04105^{+0.00082}_{-0.00084} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1420^{+0.0024}_{-0.0024} \quad (-0.1\sigma)$	$z_{eq}$	$3377^{+58}_{-58} \quad (-0.1\sigma)$
$\tau$	$0.090^{+0.041}_{-0.040} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.0962^{+0.0010}_{-0.0010} \quad (+0.0\sigma)$	$100\theta_{eq}$	$0.818^{+0.011}_{-0.011} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.112^{+0.083}_{-0.081} \quad (-0.1\sigma)$	$\sigma_8$	$0.835^{+0.032}_{-0.031} \quad (-0.0\sigma)$	$r_{drag}/D_V(0.57)$	$0.07172^{+0.00086}_{-0.00082} \quad (+0.1\sigma)$
$n_s$	$0.9687^{+0.0093}_{-0.0093} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.464^{+0.021}_{-0.020} \quad (-0.1\sigma)$	$H(0.57)$	$93.13^{+0.60}_{-0.57} \quad (+0.1\sigma)$
$dn_s/d \ln k$	$-0.008^{+0.016}_{-0.016} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.623^{+0.025}_{-0.025} \quad (-0.1\sigma)$	$D_A(0.57)$	$1385^{+15}_{-16} \quad (-0.1\sigma)$
$y_{cal}$	$1.0003^{+0.0051}_{-0.0050} \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$1.014^{+0.039}_{-0.039} \quad (-0.1\sigma)$	$F_{AP}(0.57)$	$0.6754^{+0.0039}_{-0.0038} \quad (-0.1\sigma)$
$A_{100}^{PS}$	$248^{+40}_{-50} \quad (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.493^{+0.085}_{-0.087} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.485^{+0.019}_{-0.019} \quad (-0.1\sigma)$
$A_{143}^{PS}$	$40^{+10}_{-10} \quad (-0.6\sigma)$	$z_{re}$	$10.9^{+3.5}_{-3.5} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.622^{+0.025}_{-0.024} \quad (-0.0\sigma)$
$A_{217}^{PS}$	$97^{+30}_{-30} \quad (+0.0\sigma)$	$10^9 A_s$	$2.25^{+0.19}_{-0.18} \quad (-0.1\sigma)$	$Y_P^{BBN}$	$0.24631^{+0.00020}_{-0.00020} \quad (-3.9\sigma)$
$A_{217}^{CIB}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.024}_{-0.024} \quad (-0.4\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.4\sigma)$
$A_{143}^{tSZ}$	$< 6.47 \quad (-0.9\sigma)$	$D_{40}$	$1214^{+40}_{-37} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$106.7^{+4.1}_{-4.1} \quad (+0.1\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.22}_{-0.20}$	$D_{220}$	$5701^{+81}_{-80} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-5} \quad (-0.4\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{810}$	$2532^{+29}_{-27} \quad (-0.3\sigma)$	$\chi_{lowTEB}^2$	$10495.8 \quad (\nu: 3.6) \quad (-0.1\sigma)$
$A^{kSZ}$	—	$D_{1420}$	$814^{+10}_{-10} \quad (+0.0\sigma)$	$\chi_{CamSpec}^2$	$8060.1 \quad (\nu: 17.9)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.37}$	$n_{s,0.002}$	$0.993^{+0.051}_{-0.051} \quad (-0.0\sigma)$	$\chi_{6DF}^2$	$0.056 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{143}^{dust}$	$1.02^{+0.35}_{-0.35}$	$Y_P$	$0.24498^{+0.00020}_{-0.00019} \quad (-3.9\sigma)$	$\chi_{MGS}^2$	$1.43 \quad (\nu: 0.2) \quad (+0.1\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$Age/Gyr$	$13.787^{+0.062}_{-0.064} \quad (-0.0\sigma)$	$\chi_{DR11CMass}^2$	$2.89 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$z_*$	$1089.78^{+0.66}_{-0.67} \quad (-0.1\sigma)$	$\chi_{DR11LOWZ}^2$	$0.68 \quad (\nu: 0.2) \quad (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$r_*$	$144.69^{+0.65}_{-0.65} \quad (+0.1\sigma)$	$\chi_{prior}^2$	$8.5 \quad (\nu: 6.3) \quad (+0.3\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$100\theta_*$	$1.04124^{+0.00081}_{-0.00083} \quad (+0.1\sigma)$	$\chi_{CMB}^2$	$18555.9 \quad (\nu: 16.7) \quad (+1305.1\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$z_{drag}$	$1059.9^{+1.0}_{-1.0} \quad (-0.0\sigma)$	$\chi_{BAO}^2$	$5.05 \quad (\nu: 0.5) \quad (-0.0\sigma)$
$H_0$	$67.8^{+1.2}_{-1.1} \quad (+0.1\sigma)$	$r_{drag}$	$147.35^{+0.72}_{-0.72} \quad (+0.1\sigma)$		

$$\bar{\chi}_{eff}^2 = 18569.37; \Delta \bar{\chi}_{eff}^2 = 7282.92; R - 1 = 0.00824$$

### 17.17 base\_nrun\_CamSpecHM\_TT\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00054}_{-0.00050} \quad (+0.0\sigma)$	$H_0$	$67.8^{+1.9}_{-1.9} \quad (+0.1\sigma)$	$z_{\text{drag}}$	$1059.9^{+1.1}_{-1.0} \quad (-0.0\sigma)$
$\Omega_c h^2$	$0.1189^{+0.0041}_{-0.0041} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.691^{+0.024}_{-0.026} \quad (+0.1\sigma)$	$r_{\text{drag}}$	$147.34^{+0.95}_{-0.94} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04104^{+0.00094}_{-0.00094} \quad (+0.1\sigma)$	$\Omega_m$	$0.309^{+0.026}_{-0.024} \quad (-0.1\sigma)$	$k_D$	$0.1406^{+0.0011}_{-0.0011} \quad (-0.1\sigma)$
$\tau$	$0.091^{+0.044}_{-0.042} \quad (+0.0\sigma)$	$\Omega_m h^2$	$0.1420^{+0.0039}_{-0.0039} \quad (-0.1\sigma)$	$100\theta_D$	$0.16076^{+0.00061}_{-0.00061} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.113^{+0.087}_{-0.083} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.0963^{+0.0010}_{-0.0010} \quad (+0.0\sigma)$	$z_{\text{eq}}$	$3377^{+92}_{-93} \quad (-0.1\sigma)$
$n_s$	$0.969^{+0.012}_{-0.012} \quad (+0.4\sigma)$	$\sigma_8$	$0.835^{+0.032}_{-0.031} \quad (-0.0\sigma)$	$100\theta_{\text{eq}}$	$0.818^{+0.018}_{-0.017} \quad (+0.1\sigma)$
$dn_s/d \ln k$	$-0.008^{+0.016}_{-0.016} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.464^{+0.025}_{-0.025} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0717^{+0.0014}_{-0.0014} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0050} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.623^{+0.026}_{-0.026} \quad (-0.1\sigma)$	$H(0.57)$	$93.14^{+0.87}_{-0.81} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$248^{+40}_{-50} \quad (-0.5\sigma)$	$\sigma_8/h^{0.5}$	$1.015^{+0.040}_{-0.040} \quad (-0.1\sigma)$	$D_A(0.57)$	$1385^{+25}_{-25} \quad (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$40^{+10}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.494^{+0.088}_{-0.091} \quad (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6754^{+0.0064}_{-0.0063} \quad (-0.1\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.0\sigma)$	$z_{\text{re}}$	$10.9^{+3.7}_{-3.7} \quad (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.485^{+0.019}_{-0.020} \quad (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s$	$2.25^{+0.20}_{-0.18} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.622^{+0.025}_{-0.024} \quad (+0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.48 \quad (-0.9\sigma)$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.028}_{-0.028} \quad (-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24631^{+0.00023}_{-0.00022} \quad (-3.4\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.20}$	$D_{40}$	$1213^{+41}_{-40} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.5\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5701^{+82}_{-81} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.7^{+4.2}_{-4.2} \quad (+0.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2532^{+29}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-5} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.37}$	$D_{1420}$	$814^{+10}_{-10} \quad (+0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.9 \quad (\nu: 3.7) \quad (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.994^{+0.054}_{-0.052} \quad (-0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8060.5 \quad (\nu: 18.4)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.24499^{+0.00023}_{-0.00021} \quad (-3.5\sigma)$	$\chi_{\text{JLA}}^2$	$706.82 \quad (\nu: 0.1) \quad (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.36}$	$\text{Age}/\text{Gyr}$	$13.786^{+0.078}_{-0.082} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.2) \quad (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$z_*$	$1089.77^{+0.87}_{-0.88} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18556.4 \quad (\nu: 17.4) \quad (+1278.7\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0034} \quad (+0.9\sigma)$	$r_*$	$144.69^{+0.94}_{-0.93} \quad (+0.1\sigma)$		
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.04123^{+0.00092}_{-0.00091} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 19271.67; \Delta\chi_{\text{eff}}^2 = 7282.85; R - 1 = 0.00747$$

17.18 base\_nrun\_CamSpecHM\_TT\_lowTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00054}_{-0.00050} \quad (+0.1\sigma)$	$H_0$	$68.0^{+2.0}_{-1.8} \quad (+0.1\sigma)$	$z_{\text{drag}}$	$1059.7^{+1.1}_{-1.0} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1182^{+0.0040}_{-0.0041} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.695^{+0.025}_{-0.025} \quad (+0.1\sigma)$	$r_{\text{drag}}$	$147.62^{+0.90}_{-0.85} \quad (+0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04112^{+0.00091}_{-0.00091} \quad (+0.1\sigma)$	$\Omega_m$	$0.305^{+0.025}_{-0.025} \quad (-0.1\sigma)$	$k_D$	$0.14029^{+0.00098}_{-0.00096} \quad (+0.1\sigma)$
$\tau$	$0.071^{+0.035}_{-0.033} \quad (+0.2\sigma)$	$\Omega_m h^2$	$0.1412^{+0.0037}_{-0.0039} \quad (-0.1\sigma)$	$100\theta_D$	$0.16090^{+0.00058}_{-0.00060} \quad (-0.2\sigma)$
$\ln(10^{10} A_s)$	$3.071^{+0.063}_{-0.060} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.09602^{+0.00095}_{-0.00092} \quad (+0.1\sigma)$	$z_{\text{eq}}$	$3358^{+90}_{-92} \quad (-0.1\sigma)$
$n_s$	$0.970^{+0.012}_{-0.012} \quad (+0.4\sigma)$	$\sigma_8$	$0.817^{+0.019}_{-0.019} \quad (+0.2\sigma)$	$100\theta_{\text{eq}}$	$0.821^{+0.018}_{-0.017} \quad (+0.1\sigma)$
$dn_s/d \ln k$	$-0.003^{+0.015}_{-0.015} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.018}_{-0.018} \quad (+0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0720^{+0.0015}_{-0.0014} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0051}_{-0.0048} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.015}_{-0.015} \quad (+0.1\sigma)$	$H(0.57)$	$93.18^{+0.89}_{-0.82} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$248^{+40}_{-50} \quad (-0.5\sigma)$	$\sigma_8/h^{0.5}$	$0.991^{+0.022}_{-0.021} \quad (+0.1\sigma)$	$D_A(0.57)$	$1382^{+25}_{-26} \quad (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$39^{+20}_{-20} \quad (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.444^{+0.054}_{-0.053} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6745^{+0.0063}_{-0.0065} \quad (-0.1\sigma)$
$A_{217}^{\text{PS}}$	$96^{+30}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$9.2^{+3.1}_{-3.3} \quad (+0.2\sigma)$	$f\sigma_8(0.57)$	$0.474^{+0.010}_{-0.010} \quad (+0.1\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s$	$2.16^{+0.14}_{-0.13} \quad (+0.1\sigma)$	$\sigma_8(0.57)$	$0.610^{+0.017}_{-0.017} \quad (+0.2\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.43 \quad (-0.9\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.026}_{-0.026} \quad (-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24628^{+0.00023}_{-0.00022} \quad (-3.4\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.21}_{-0.19}$	$D_{40}$	$1213^{+42}_{-40} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.6\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5698^{+84}_{-77} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.7^{+4.2}_{-4.3} \quad (+0.0\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2529^{+28}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-5} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.37}$	$D_{1420}$	$814^{+11}_{-10} \quad (+0.1\sigma)$	$\chi_{\text{lensing}}^2$	$9.99 \quad (\nu: 1.3) \quad (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.36}_{-0.36}$	$n_{\text{s},0.002}$	$0.979^{+0.048}_{-0.047} \quad (+0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10494.9 \quad (\nu: 2.4) \quad (-0.1\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.24496^{+0.00023}_{-0.00021} \quad (-3.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$8062.5 \quad (\nu: 17.5)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.35}$	$\text{Age/Gyr}$	$13.788^{+0.079}_{-0.082} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.5 \quad (\nu: 6.2) \quad (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0020} \quad (-1.4\sigma)$	$z_*$	$1089.81^{+0.89}_{-0.90} \quad (-0.2\sigma)$	$\chi_{\text{CMB}}^2$	$18567.3 \quad (\nu: 17.5) \quad (+1272.5\sigma)$
$c_{217}$	$0.9974^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$r_*$	$144.93^{+0.91}_{-0.86} \quad (+0.0\sigma)$		
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.04132^{+0.00088}_{-0.00089} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18575.85; \Delta\chi_{\text{eff}}^2 = 7282.49; R - 1 = 0.02683$$

### 17.19 base\_nrun\_CamSpecHM\_TT\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02242^{+0.00054}_{-0.00050} \quad (+0.0\sigma)$	$H_0$	$67.9^{+2.0}_{-1.9} \quad (+0.1\sigma)$	$z_{\text{drag}}$	$1059.9^{+1.1}_{-1.0} \quad (-0.0\sigma)$
$\Omega_c h^2$	$0.1188^{+0.0042}_{-0.0042} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.692^{+0.025}_{-0.027} \quad (+0.1\sigma)$	$r_{\text{drag}}$	$147.36^{+0.97}_{-0.96} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04107^{+0.00095}_{-0.00095} \quad (+0.1\sigma)$	$\Omega_m$	$0.308^{+0.027}_{-0.025} \quad (-0.1\sigma)$	$k_D$	$0.1406^{+0.0011}_{-0.0011} \quad (-0.1\sigma)$
$\tau$	$0.092^{+0.045}_{-0.042} \quad (+0.0\sigma)$	$\Omega_m h^2$	$0.1419^{+0.0040}_{-0.0040} \quad (-0.1\sigma)$	$100\theta_D$	$0.16074^{+0.00062}_{-0.00061} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.115^{+0.087}_{-0.083} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.0963^{+0.0010}_{-0.0010} \quad (+0.0\sigma)$	$z_{\text{eq}}$	$3374^{+96}_{-96} \quad (-0.1\sigma)$
$n_s$	$0.969^{+0.013}_{-0.012} \quad (+0.4\sigma)$	$\sigma_8$	$0.836^{+0.032}_{-0.031} \quad (-0.0\sigma)$	$100\theta_{\text{eq}}$	$0.819^{+0.019}_{-0.018} \quad (+0.1\sigma)$
$dn_s/d \ln k$	$-0.008^{+0.016}_{-0.016} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.464^{+0.026}_{-0.026} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0718^{+0.0015}_{-0.0014} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0050} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.623^{+0.026}_{-0.027} \quad (-0.1\sigma)$	$H(0.57)$	$93.18^{+0.90}_{-0.84} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$248^{+40}_{-50} \quad (-0.5\sigma)$	$\sigma_8/h^{0.5}$	$1.014^{+0.040}_{-0.040} \quad (-0.1\sigma)$	$D_A(0.57)$	$1384^{+26}_{-26} \quad (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$40^{+10}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.493^{+0.088}_{-0.091} \quad (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6751^{+0.0067}_{-0.0065} \quad (-0.1\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.0\sigma)$	$z_{\text{re}}$	$11.0^{+3.7}_{-3.8} \quad (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.485^{+0.019}_{-0.020} \quad (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s$	$2.26^{+0.20}_{-0.18} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.623^{+0.025}_{-0.024} \quad (+0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.48 \quad (-0.9\sigma)$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.028}_{-0.028} \quad (-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24632^{+0.00023}_{-0.00022} \quad (-3.4\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.20}$	$D_{40}$	$1213^{+41}_{-40} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.5\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5702^{+82}_{-81} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.6^{+4.2}_{-4.3} \quad (+0.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2532^{+29}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-5} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.37}$	$D_{1420}$	$814^{+11}_{-10} \quad (+0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.9 \quad (\nu: 3.8) \quad (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$n_{s,0.002}$	$0.995^{+0.054}_{-0.052} \quad (-0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8060.6 \quad (\nu: 18.6)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.24500^{+0.00023}_{-0.00021} \quad (-3.4\sigma)$	$\chi_{\text{H070p6}}^2$	$0.75 \quad (\nu: 0.1) \quad (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.36}$	$\text{Age}/\text{Gyr}$	$13.783^{+0.080}_{-0.083} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.2) \quad (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$z_*$	$1089.74^{+0.89}_{-0.90} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18556.5 \quad (\nu: 17.6) \quad (+1270.2\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0034} \quad (+0.9\sigma)$	$r_*$	$144.71^{+0.97}_{-0.96} \quad (+0.1\sigma)$		
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.04126^{+0.00092}_{-0.00093} \quad (+0.2\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18565.73; \Delta\chi_{\text{eff}}^2 = 7282.85; R - 1 = 0.00786$$

## 17.20 base\_nrun\_CamSpecHM\_TT\_lowTEB\_post\_lensing\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00042}_{-0.00041} \quad (+0.1\sigma)$	$\Omega_m$	$0.306^{+0.014}_{-0.014} \quad (-0.0\sigma)$	$z_{\text{eq}}$	$3360^{+53}_{-54} \quad (+0.0\sigma)$
$\Omega_c h^2$	$0.1183^{+0.0023}_{-0.0024} \quad (+0.0\sigma)$	$\Omega_m h^2$	$0.1413^{+0.0022}_{-0.0023} \quad (+0.0\sigma)$	$100\theta_{\text{eq}}$	$0.821^{+0.010}_{-0.010} \quad (-0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04111^{+0.00082}_{-0.00083} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.09603^{+0.00095}_{-0.00093} \quad (+0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07192^{+0.00081}_{-0.00078} \quad (+0.0\sigma)$
$\tau$	$0.071^{+0.026}_{-0.027} \quad (+0.1\sigma)$	$\sigma_8$	$0.817^{+0.018}_{-0.018} \quad (+0.1\sigma)$	$H(0.57)$	$93.16^{+0.56}_{-0.54} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.070^{+0.050}_{-0.049} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.013}_{-0.013} \quad (+0.1\sigma)$	$D_A(0.57)$	$1383^{+15}_{-15} \quad (-0.1\sigma)$
$n_s$	$0.9699^{+0.0091}_{-0.0094} \quad (+0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.014}_{-0.014} \quad (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6746^{+0.0035}_{-0.0036} \quad (-0.0\sigma)$
$dn_s/d \ln k$	$-0.003^{+0.015}_{-0.014} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$0.991^{+0.021}_{-0.021} \quad (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.474^{+0.010}_{-0.010} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0051}_{-0.0048} \quad (-0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.443^{+0.053}_{-0.053} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.609^{+0.015}_{-0.015} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$248^{+40}_{-50} \quad (-0.6\sigma)$	$z_{\text{re}}$	$9.2^{+2.4}_{-2.5} \quad (+0.1\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24628^{+0.00018}_{-0.00018} \quad (-4.1\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-10} \quad (-0.7\sigma)$	$10^9 A_s$	$2.15^{+0.11}_{-0.10} \quad (+0.0\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.5\sigma)$
$A_{217}^{\text{PS}}$	$96^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.023}_{-0.023} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.7^{+4.2}_{-4.3} \quad (+0.0\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$D_{40}$	$1213^{+40}_{-39} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-5} \quad (-0.5\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.47 \quad (-0.9\sigma)$	$D_{220}$	$5698^{+84}_{-75} \quad (-0.5\sigma)$	$\chi_{\text{lensing}}^2$	$9.95 \quad (\nu: 1.2) \quad (-0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.21}_{-0.20}$	$D_{810}$	$2529^{+29}_{-27} \quad (-0.3\sigma)$	$\chi_{\text{lowTEB}}^2$	$10494.6 \quad (\nu: 2.2) \quad (-0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{1420}$	$814^{+10}_{-9.7} \quad (+0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8062.1 \quad (\nu: 16.8)$
$A^{\text{kSZ}}$	—	$n_{\text{s},0.002}$	$0.978^{+0.045}_{-0.047} \quad (+0.0\sigma)$	$\chi_{\text{H070p6}}^2$	$0.65 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{100}^{\text{dust}}$	$0.997^{+0.37}_{-0.36}$	$Y_{\text{P}}$	$0.24495^{+0.00019}_{-0.00017} \quad (-4.1\sigma)$	$\chi_{\text{JLA}}^2$	$706.65 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.35}_{-0.35}$	$\text{Age/Gyr}$	$13.789^{+0.060}_{-0.058} \quad (-0.1\sigma)$	$\chi_{6\text{DF}}^2$	$0.037 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.24}$	$z_*$	$1089.82^{+0.62}_{-0.62} \quad (-0.1\sigma)$	$\chi_{\text{MGS}}^2$	$1.68 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.36}$	$r_*$	$144.91^{+0.60}_{-0.58} \quad (-0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.84 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.5\sigma)$	$100\theta_*$	$1.04131^{+0.00081}_{-0.00082} \quad (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.44 \quad (\nu: 0.1) \quad (-0.0\sigma)$
$c_{217}$	$0.9974^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$z_{\text{drag}}$	$1059.69^{+0.98}_{-0.93} \quad (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.5 \quad (\nu: 6.2) \quad (+0.3\sigma)$
$\beta_1^1$	$0.0^{+2.0}_{-1.9}$	$r_{\text{drag}}$	$147.60^{+0.64}_{-0.66} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18566.7 \quad (\nu: 16.7) \quad (+1314.2\sigma)$
$H_0$	$68.0^{+1.1}_{-1.1} \quad (+0.0\sigma)$	$k_{\text{D}}$	$0.14031^{+0.00087}_{-0.00086} \quad (+0.1\sigma)$	$\chi_{\text{BAO}}^2$	$5.00 \quad (\nu: 0.4) \quad (-0.0\sigma)$
$\Omega_{\Lambda}$	$0.694^{+0.014}_{-0.014} \quad (+0.0\sigma)$	$100\theta_{\text{D}}$	$0.16089^{+0.00054}_{-0.00054} \quad (-0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 19287.49; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.61; R - 1 = 0.02448$$

## 17.21 base\_nrun\_CamSpecHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00054}_{-0.00050} \quad (+0.1\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$r_*$	$144.6^{+1.0}_{-0.98} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1193^{+0.0044}_{-0.0044} \quad (-0.1\sigma)$	$H_0$	$67.6^{+2.0}_{-1.9} \quad (+0.1\sigma)$	$100\theta_*$	$1.04119^{+0.00094}_{-0.00095} \quad (+0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04100^{+0.00096}_{-0.00097} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.689^{+0.026}_{-0.027} \quad (+0.1\sigma)$	$z_{\text{drag}}$	$1059.9^{+1.1}_{-1.0} \quad (-0.0\sigma)$
$\tau$	$0.090^{+0.042}_{-0.041} \quad (+0.0\sigma)$	$\Omega_m$	$0.311^{+0.028}_{-0.026} \quad (-0.1\sigma)$	$r_{\text{drag}}$	$147.28^{+0.99}_{-0.98} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.112^{+0.084}_{-0.081} \quad (-0.0\sigma)$	$\Omega_m h^2$	$0.1423^{+0.0041}_{-0.0042} \quad (-0.1\sigma)$	$k_D$	$0.1407^{+0.0011}_{-0.0011} \quad (-0.1\sigma)$
$n_s$	$0.968^{+0.013}_{-0.012} \quad (+0.4\sigma)$	$\Omega_m h^3$	$0.0962^{+0.0010}_{-0.0010} \quad (+0.0\sigma)$	$100\theta_D$	$0.16077^{+0.00061}_{-0.00061} \quad (-0.1\sigma)$
$dn_s/d \ln k$	$-0.008^{+0.016}_{-0.016} \quad (+0.1\sigma)$	$\sigma_8$	$0.836^{+0.031}_{-0.031} \quad (-0.0\sigma)$	$z_{\text{eq}}$	$3385^{+99}_{-99} \quad (-0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0050} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.466^{+0.026}_{-0.026} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.817^{+0.019}_{-0.018} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$248^{+40}_{-50} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.624^{+0.026}_{-0.026} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0716^{+0.0015}_{-0.0015} \quad (+0.1\sigma)$
$A_{143}^{\text{PS}}$	$40^{+10}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.016^{+0.040}_{-0.039} \quad (-0.1\sigma)$	$H(0.57)$	$93.08^{+0.92}_{-0.84} \quad (+0.1\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.498^{+0.089}_{-0.088} \quad (-0.2\sigma)$	$D_A(0.57)$	$1387^{+26}_{-27} \quad (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$z_{\text{re}}$	$10.9^{+3.5}_{-3.5} \quad (+0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.6759^{+0.0069}_{-0.0067} \quad (-0.1\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.47 \quad (-0.9\sigma)$	$10^9 A_s$	$2.25^{+0.19}_{-0.18} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.486^{+0.019}_{-0.019} \quad (-0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.20}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.028}_{-0.029} \quad (-0.4\sigma)$	$\sigma_8(0.57)$	$0.622^{+0.025}_{-0.023} \quad (+0.0\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1215^{+41}_{-40} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24630^{+0.00023}_{-0.00022} \quad (-3.4\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5700^{+83}_{-81} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$D_{810}$	$2532^{+28}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$106.8^{+4.2}_{-4.2} \quad (+0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.35}$	$D_{1420}$	$814^{+10}_{-10} \quad (+0.0\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-5} \quad (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.993^{+0.053}_{-0.051} \quad (+0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.9 \quad (\nu: 3.6) \quad (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.36}$	$Y_{\text{P}}$	$0.24498^{+0.00023}_{-0.00021} \quad (-3.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$8060.5 \quad (\nu: 18.3)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	Age/Gyr	$13.791^{+0.081}_{-0.085} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.2) \quad (+0.3\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$z_*$	$1089.83^{+0.90}_{-0.93} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18556.4 \quad (\nu: 17.3) \quad (+1281.4\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 18564.83; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.86; R - 1 = 0.00717$$

## 17.22 base\_nrun\_CamSpecHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022383	$0.02239^{+0.00033}_{-0.00033}$ $(+0.6\sigma)$	$\mathcal{C}_{EE}$	1.0008	$1.0007^{+0.0085}_{-0.0084}$	$r_*$	144.64	$144.64^{+0.64}_{-0.66}$ $(+0.3\sigma)$
$\Omega_c h^2$	0.11917	$0.1192^{+0.0029}_{-0.0028}$ $(-0.5\sigma)$	$\beta_1^1$	-0.06	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	1.04104	$1.04103^{+0.00057}_{-0.00060}$ $(+0.2\sigma)$
$100\theta_{MC}$	1.04084	$1.04084^{+0.00058}_{-0.00060}$ $(+0.2\sigma)$	$H_0$	67.63	$67.6^{+1.3}_{-1.3}$ $(+0.5\sigma)$	$z_{drag}$	1059.89	$1059.91^{+0.68}_{-0.66}$ $(+0.5\sigma)$
$\tau$	0.0802	$0.081^{+0.037}_{-0.035}$ $(-0.1\sigma)$	$\Omega_\Lambda$	0.6891	$0.689^{+0.017}_{-0.018}$ $(+0.5\sigma)$	$r_{drag}$	147.30	$147.29^{+0.65}_{-0.66}$ $(+0.2\sigma)$
$\ln(10^{10} A_s)$	3.092	$3.094^{+0.073}_{-0.070}$ $(-0.3\sigma)$	$\Omega_m$	0.3109	$0.311^{+0.018}_{-0.017}$ $(-0.5\sigma)$	$k_D$	0.14067	$0.14069^{+0.00073}_{-0.00071}$ $(+0.1\sigma)$
$n_s$	0.9667	$0.9676^{+0.0098}_{-0.0097}$ $(+0.8\sigma)$	$\Omega_m h^2$	0.14220	$0.1422^{+0.0028}_{-0.0027}$ $(-0.4\sigma)$	$100\theta_D$	0.160738	$0.16073^{+0.00040}_{-0.00039}$ $(-0.6\sigma)$
$dn_s/d \ln k$	-0.0042	$-0.003^{+0.014}_{-0.014}$ $(+0.3\sigma)$	$\Omega_m h^3$	0.09617	$0.09618^{+0.00062}_{-0.00063}$ $(+0.3\sigma)$	$z_{eq}$	3383	$3382^{+66}_{-64}$ $(-0.4\sigma)$
$y_{cal}$	1.00020	$1.0003^{+0.0048}_{-0.0048}$ $(-0.0\sigma)$	$\sigma_8$	0.8275	$0.829^{+0.027}_{-0.027}$ $(-0.4\sigma)$	$100\theta_{eq}$	0.8168	$0.817^{+0.012}_{-0.012}$ $(+0.4\sigma)$
$A_{100}^{PS}$	250.0	$245^{+40}_{-40}$ $(-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4614	$0.462^{+0.019}_{-0.020}$ $(-0.6\sigma)$	$r_{drag}/D_V(0.57)$	0.07159	$0.07160^{+0.00097}_{-0.00096}$ $(+0.5\sigma)$
$A_{143}^{PS}$	35.9	$39^{+20}_{-20}$ $(-0.8\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.6179	$0.619^{+0.022}_{-0.022}$ $(-0.5\sigma)$	$H(0.57)$	93.04	$93.06^{+0.57}_{-0.54}$ $(+0.5\sigma)$
$A_{217}^{PS}$	96.2	$98^{+30}_{-30}$ $(+0.1\sigma)$	$\sigma_8/h^{0.5}$	1.0062	$1.008^{+0.034}_{-0.034}$ $(-0.5\sigma)$	$D_A(0.57)$	1387.1	$1387^{+17}_{-17}$ $(-0.5\sigma)$
$A_{217}^{CIB}$	47.4	$46^{+10}_{-10}$ $(-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	2.482	$2.485^{+0.077}_{-0.080}$ $(-0.6\sigma)$	$F_{AP}(0.57)$	0.67588	$0.6759^{+0.0045}_{-0.0043}$ $(-0.5\sigma)$
$A_{143}^{tSZ}$	3.32	$< 6.69$ $(-0.9\sigma)$	$z_{re}$	10.13	$10.1^{+3.1}_{-3.3}$ $(-0.2\sigma)$	$f\sigma_8(0.57)$	0.4810	$0.482^{+0.016}_{-0.016}$ $(-0.5\sigma)$
$r_{143 \times 217}^{PS}$	0.418	$0.52^{+0.23}_{-0.21}$	$10^9 A_s$	2.202	$2.21^{+0.16}_{-0.15}$ $(-0.3\sigma)$	$\sigma_8(0.57)$	0.6157	$0.617^{+0.022}_{-0.021}$ $(-0.2\sigma)$
$\xi^{tSZ \times CIB}$	0.01	—	$10^9 A_s e^{-2\tau}$	1.8754	$1.876^{+0.024}_{-0.024}$ $(-0.7\sigma)$	$Y_P^{BBN}$	0.246309	$0.24631^{+0.00014}_{-0.00014}$ $(-4.9\sigma)$
$A^{kSZ}$	5.2	—	$D_{40}$	1221.6	$1223^{+37}_{-35}$ $(-0.3\sigma)$	$f_{2000}^{143}$	29.6	$29^{+6}_{-6}$ $(-0.6\sigma)$
$A_{100}^{dust}$	0.973	$0.99^{+0.38}_{-0.38}$	$D_{220}$	5712	$5712^{+77}_{-76}$ $(-0.4\sigma)$	$f_{2000}^{217}$	106.81	$106.2^{+4.0}_{-4.1}$ $(-0.1\sigma)$
$A_{143}^{dust}$	1.019	$1.02^{+0.36}_{-0.36}$	$D_{810}$	2530.3	$2532^{+27}_{-26}$ $(-0.4\sigma)$	$f_{2000}^{143 \times 217}$	31.97	$32^{+4}_{-4}$ $(-0.6\sigma)$
$A_{217}^{dust}$	1.219	$1.21^{+0.23}_{-0.23}$	$D_{1420}$	813.4	$814.4^{+9.7}_{-9.5}$ $(+0.2\sigma)$	$\chi_{lowTEB}^2$	10494.81	$10496.1 (\nu: 3.3)$ $(-0.2\sigma)$
$A_{143 \times 217}^{dust}$	0.969	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	0.9802	$0.978^{+0.043}_{-0.043}$ $(-0.2\sigma)$	$\chi_{CamSpec}^2$	12936.6	$12953.6 (\nu: 19.8)$
$c_{100}$	0.99672	$0.9968^{+0.0019}_{-0.0019}$ $(-1.8\sigma)$	$Y_P$	0.244977	$0.24498^{+0.00015}_{-0.00014}$ $(-5.0\sigma)$	$\chi_{prior}^2$	3.6	$8.9 (\nu: 6.2)$ $(-1.9\sigma)$
$c_{217}$	0.99732	$0.9971^{+0.0035}_{-0.0034}$ $(+0.7\sigma)$	Age/Gyr	13.795	$13.794^{+0.051}_{-0.051}$ $(-0.5\sigma)$	$\chi_{CMB}^2$	23431.4	$23449.7 (\nu: 18.9)$ $(+1548.8\sigma)$
$c_{TE}$	1.0037	$1.0038^{+0.0090}_{-0.0088}$	$z_*$	1089.81	$1089.80^{+0.59}_{-0.58}$ $(-0.7\sigma)$			

Best-fit  $\chi_{eff}^2 = 23435.08$ ;  $\Delta\chi_{eff}^2 = 10499.96$ ;  $\bar{\chi}_{eff}^2 = 23458.60$ ;  $\Delta\bar{\chi}_{eff}^2 = 10490.54$ ;  $R - 1 = 0.00840$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10494.81 ( $\Delta$  -0.93) CamSpec like.v9.10CMH\_unified: 12936.63



### 17.23 base\_nrun\_CamSpecHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02241^{+0.00031}_{-0.00030} \quad (+0.5\sigma)$	$H_0$	$67.76^{+0.94}_{-0.93} \quad (+0.4\sigma)$	$k_D$	$0.14065^{+0.00064}_{-0.00064} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1189^{+0.0021}_{-0.0021} \quad (-0.3\sigma)$	$\Omega_\Lambda$	$0.691^{+0.012}_{-0.013} \quad (+0.4\sigma)$	$100\theta_D$	$0.16072^{+0.00038}_{-0.00039} \quad (-0.6\sigma)$
$100\theta_{MC}$	$1.04087^{+0.00055}_{-0.00058} \quad (+0.1\sigma)$	$\Omega_m$	$0.309^{+0.013}_{-0.012} \quad (-0.4\sigma)$	$z_{eq}$	$3377^{+47}_{-47} \quad (-0.3\sigma)$
$\tau$	$0.082^{+0.036}_{-0.035} \quad (-0.2\sigma)$	$\Omega_m h^2$	$0.1419^{+0.0020}_{-0.0020} \quad (-0.3\sigma)$	$100\theta_{eq}$	$0.8180^{+0.0090}_{-0.0089} \quad (+0.3\sigma)$
$\ln(10^{10} A_s)$	$3.096^{+0.071}_{-0.070} \quad (-0.4\sigma)$	$\Omega_m h^3$	$0.09618^{+0.00061}_{-0.00063} \quad (+0.3\sigma)$	$r_{drag}/D_V(0.57)$	$0.07169^{+0.00071}_{-0.00069} \quad (+0.3\sigma)$
$n_s$	$0.9683^{+0.0085}_{-0.0084} \quad (+0.7\sigma)$	$\sigma_8$	$0.829^{+0.028}_{-0.028} \quad (-0.4\sigma)$	$H(0.57)$	$93.10^{+0.44}_{-0.43} \quad (+0.4\sigma)$
$dn_s/d \ln k$	$-0.003^{+0.014}_{-0.014} \quad (+0.3\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.461^{+0.017}_{-0.018} \quad (-0.5\sigma)$	$D_A(0.57)$	$1385^{+13}_{-13} \quad (-0.4\sigma)$
$y_{cal}$	$1.0003^{+0.0048}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.618^{+0.022}_{-0.022} \quad (-0.5\sigma)$	$F_{AP}(0.57)$	$0.6754^{+0.0032}_{-0.0032} \quad (-0.4\sigma)$
$A_{100}^{PS}$	$245^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.007^{+0.034}_{-0.034} \quad (-0.5\sigma)$	$f\sigma_8(0.57)$	$0.481^{+0.016}_{-0.016} \quad (-0.4\sigma)$
$A_{143}^{PS}$	$39^{+10}_{-20} \quad (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.483^{+0.077}_{-0.080} \quad (-0.5\sigma)$	$\sigma_8(0.57)$	$0.617^{+0.021}_{-0.021} \quad (-0.3\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$z_{re}$	$10.2^{+3.0}_{-3.2} \quad (-0.3\sigma)$	$Y_P^{BBN}$	$0.24632^{+0.00013}_{-0.00013} \quad (-5.7\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.21^{+0.16}_{-0.15} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.5\sigma)$
$A_{143}^{tSZ}$	$< 6.72 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.023}_{-0.023} \quad (-0.6\sigma)$	$f_{2000}^{217}$	$106.2^{+4.0}_{-4.0} \quad (-0.0\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.21}$	$D_{40}$	$1222^{+36}_{-34} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{220}$	$5712^{+76}_{-75} \quad (-0.4\sigma)$	$\chi_{lowTEB}^2$	$10496.0 \quad (\nu: 3.4) \quad (-0.2\sigma)$
$A^{kSZ}$	—	$D_{810}$	$2531^{+27}_{-26} \quad (-0.4\sigma)$	$\chi_{CamSpec}^2$	$12953.3 \quad (\nu: 19.0)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.39}$	$D_{1420}$	$814.5^{+9.7}_{-9.4} \quad (+0.1\sigma)$	$\chi_{6DF}^2$	$0.045 \quad (\nu: 0.0) \quad (-0.3\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$n_{s,0.002}$	$0.979^{+0.043}_{-0.043} \quad (-0.2\sigma)$	$\chi_{MGS}^2$	$1.38 \quad (\nu: 0.1) \quad (+0.3\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$Y_P$	$0.24499^{+0.00014}_{-0.00013} \quad (-5.7\sigma)$	$\chi_{DR11CMass}^2$	$2.76 \quad (\nu: 0.1) \quad (-0.2\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$Age/Gyr$	$13.790^{+0.043}_{-0.043} \quad (-0.4\sigma)$	$\chi_{DR11LOWZ}^2$	$0.67 \quad (\nu: 0.1) \quad (-0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.7\sigma)$	$z_*$	$1089.76^{+0.48}_{-0.48} \quad (-0.6\sigma)$	$\chi_{prior}^2$	$8.9 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0034} \quad (+0.7\sigma)$	$r_*$	$144.69^{+0.49}_{-0.49} \quad (+0.1\sigma)$	$\chi_{CMB}^2$	$23449.3 \quad (\nu: 18.0) \quad (+1573.3\sigma)$
$c_{TE}$	$1.0038^{+0.0091}_{-0.0089}$	$100\theta_*$	$1.04106^{+0.00053}_{-0.00057} \quad (+0.1\sigma)$	$\chi_{BAO}^2$	$4.85 \quad (\nu: 0.3) \quad (-0.2\sigma)$
$c_{EE}$	$1.0007^{+0.0085}_{-0.0083}$	$z_{drag}$	$1059.93^{+0.65}_{-0.64} \quad (+0.4\sigma)$		
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_{drag}$	$147.34^{+0.53}_{-0.52} \quad (+0.0\sigma)$		

$$\bar{\chi}_{eff}^2 = 23463.06; \Delta\bar{\chi}_{eff}^2 = 10490.35; R - 1 = 0.00851$$

## 17.24 base\_nrun\_CamSpecHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02241^{+0.00032}_{-0.00033} \quad (+0.6\sigma)$	$c_{EE}$	$1.0007^{+0.0085}_{-0.0084}$	$r_*$	$144.67^{+0.63}_{-0.64} \quad (+0.3\sigma)$
$\Omega_c h^2$	$0.1190^{+0.0028}_{-0.0027} \quad (-0.4\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	$1.04105^{+0.00057}_{-0.00059} \quad (+0.2\sigma)$
$100\theta_{MC}$	$1.04086^{+0.00057}_{-0.00061} \quad (+0.2\sigma)$	$H_0$	$67.7^{+1.3}_{-1.2} \quad (+0.5\sigma)$	$z_{drag}$	$1059.93^{+0.71}_{-0.68} \quad (+0.5\sigma)$
$\tau$	$0.082^{+0.037}_{-0.035} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.690^{+0.016}_{-0.017} \quad (+0.5\sigma)$	$r_{drag}$	$147.33^{+0.63}_{-0.64} \quad (+0.2\sigma)$
$\ln(10^{10} A_s)$	$3.095^{+0.073}_{-0.070} \quad (-0.3\sigma)$	$\Omega_m$	$0.310^{+0.017}_{-0.016} \quad (-0.5\sigma)$	$k_D$	$0.14066^{+0.00072}_{-0.00070} \quad (+0.1\sigma)$
$n_s$	$0.9681^{+0.0096}_{-0.0096} \quad (+0.7\sigma)$	$\Omega_m h^2$	$0.1420^{+0.0027}_{-0.0026} \quad (-0.4\sigma)$	$100\theta_D$	$0.16072^{+0.00039}_{-0.00039} \quad (-0.6\sigma)$
$dn_s/d \ln k$	$-0.003^{+0.014}_{-0.014} \quad (+0.3\sigma)$	$\Omega_m h^3$	$0.09618^{+0.00062}_{-0.00063} \quad (+0.3\sigma)$	$z_{eq}$	$3379^{+63}_{-61} \quad (-0.4\sigma)$
$y_{cal}$	$1.0003^{+0.0048}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8$	$0.829^{+0.028}_{-0.028} \quad (-0.4\sigma)$	$100\theta_{eq}$	$0.818^{+0.012}_{-0.012} \quad (+0.4\sigma)$
$A_{100}^{PS}$	$245^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.461^{+0.019}_{-0.019} \quad (-0.6\sigma)$	$r_{drag}/D_V(0.57)$	$0.07166^{+0.00094}_{-0.00093} \quad (+0.5\sigma)$
$A_{143}^{PS}$	$39^{+10}_{-20} \quad (-0.8\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.618^{+0.022}_{-0.022} \quad (-0.5\sigma)$	$H(0.57)$	$93.09^{+0.55}_{-0.53} \quad (+0.5\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.007^{+0.034}_{-0.035} \quad (-0.5\sigma)$	$D_A(0.57)$	$1386^{+16}_{-17} \quad (-0.5\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.484^{+0.077}_{-0.080} \quad (-0.5\sigma)$	$F_{AP}(0.57)$	$0.6756^{+0.0043}_{-0.0042} \quad (-0.5\sigma)$
$A_{143}^{tSZ}$	$< 6.71 \quad (-0.9\sigma)$	$z_{re}$	$10.2^{+3.0}_{-3.3} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.481^{+0.017}_{-0.017} \quad (-0.5\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.23}_{-0.21}$	$10^9 A_s$	$2.21^{+0.17}_{-0.15} \quad (-0.3\sigma)$	$\sigma_8(0.57)$	$0.617^{+0.022}_{-0.021} \quad (-0.2\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.875^{+0.024}_{-0.024} \quad (-0.7\sigma)$	$Y_P^{BBN}$	$0.24632^{+0.00013}_{-0.00014} \quad (-5.0\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1223^{+37}_{-35} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.6\sigma)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.39}$	$D_{220}$	$5712^{+77}_{-77} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.2^{+4.0}_{-4.1} \quad (-0.1\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2531^{+27}_{-26} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$D_{1420}$	$814.4^{+9.8}_{-9.4} \quad (+0.2\sigma)$	$\chi_{lowTEB}^2$	$10496.1 \quad (\nu: 3.4) \quad (-0.2\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.979^{+0.043}_{-0.043} \quad (-0.2\sigma)$	$\chi_{CamSpec}^2$	$12953.6 \quad (\nu: 19.3)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.7\sigma)$	$Y_P$	$0.24499^{+0.00014}_{-0.00014} \quad (-5.1\sigma)$	$\chi_{JLA}^2$	$706.76 \quad (\nu: 0.0) \quad (-0.4\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0034} \quad (+0.7\sigma)$	$Age/Gyr$	$13.791^{+0.050}_{-0.050} \quad (-0.5\sigma)$	$\chi_{prior}^2$	$8.9 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{TE}$	$1.0038^{+0.0091}_{-0.0089}$	$z_*$	$1089.77^{+0.56}_{-0.56} \quad (-0.6\sigma)$	$\chi_{CMB}^2$	$23449.7 \quad (\nu: 18.6) \quad (+1555.2\sigma)$

$$\bar{\chi}_{eff}^2 = 24165.38; \Delta \bar{\chi}_{eff}^2 = 10490.45; R - 1 = 0.00868$$

## 17.25 base\_nrun\_CamSpecHM\_TTTEEE\_lowTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00032}_{-0.00032} \quad (+0.6\sigma)$	$c_{EE}$	$1.0014^{+0.0087}_{-0.0080}$	$r_*$	$144.77^{+0.62}_{-0.60} \quad (+0.2\sigma)$
$\Omega_c h^2$	$0.1187^{+0.0028}_{-0.0028} \quad (-0.4\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	$1.04109^{+0.00055}_{-0.00059} \quad (+0.1\sigma)$
$100\theta_{MC}$	$1.04090^{+0.00057}_{-0.00061} \quad (+0.1\sigma)$	$H_0$	$67.8^{+1.3}_{-1.3} \quad (+0.4\sigma)$	$z_{drag}$	$1059.83^{+0.67}_{-0.66} \quad (+0.5\sigma)$
$\tau$	$0.066^{+0.028}_{-0.026} \quad (+0.2\sigma)$	$\Omega_\Lambda$	$0.692^{+0.017}_{-0.017} \quad (+0.4\sigma)$	$r_{drag}$	$147.44^{+0.61}_{-0.58} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.062^{+0.051}_{-0.049} \quad (+0.1\sigma)$	$\Omega_m$	$0.308^{+0.017}_{-0.017} \quad (-0.4\sigma)$	$k_D$	$0.14052^{+0.00064}_{-0.00067} \quad (+0.2\sigma)$
$n_s$	$0.9686^{+0.0097}_{-0.0096} \quad (+0.7\sigma)$	$\Omega_m h^2$	$0.1417^{+0.0026}_{-0.0026} \quad (-0.3\sigma)$	$100\theta_D$	$0.16078^{+0.00037}_{-0.00037} \quad (-0.7\sigma)$
$dn_s/d \ln k$	$0.000^{+0.013}_{-0.013} \quad (+0.2\sigma)$	$\Omega_m h^3$	$0.09609^{+0.00061}_{-0.00061} \quad (+0.3\sigma)$	$z_{eq}$	$3371^{+62}_{-62} \quad (-0.3\sigma)$
$y_{cal}$	$1.0001^{+0.0048}_{-0.0047} \quad (+0.0\sigma)$	$\sigma_8$	$0.815^{+0.017}_{-0.018} \quad (+0.0\sigma)$	$100\theta_{eq}$	$0.819^{+0.012}_{-0.012} \quad (+0.4\sigma)$
$A_{100}^{PS}$	$245^{+40}_{-40} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.014}_{-0.013} \quad (-0.4\sigma)$	$r_{drag}/D_V(0.57)$	$0.07175^{+0.00096}_{-0.00093} \quad (+0.4\sigma)$
$A_{143}^{PS}$	$38^{+10}_{-20} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.013}_{-0.014} \quad (-0.2\sigma)$	$H(0.57)$	$93.10^{+0.55}_{-0.54} \quad (+0.5\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$0.990^{+0.020}_{-0.021} \quad (-0.2\sigma)$	$D_A(0.57)$	$1385^{+17}_{-17} \quad (-0.4\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.051}_{-0.052} \quad (-0.2\sigma)$	$F_{AP}(0.57)$	$0.6752^{+0.0044}_{-0.0042} \quad (-0.4\sigma)$
$A_{143}^{tSZ}$	$< 6.76 \quad (-0.9\sigma)$	$z_{re}$	$8.8^{+2.4}_{-2.6} \quad (+0.2\sigma)$	$f\sigma_8(0.57)$	$0.4730^{+0.0098}_{-0.010} \quad (-0.2\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.23}_{-0.21}$	$10^9 A_s$	$2.14^{+0.11}_{-0.10} \quad (+0.1\sigma)$	$\sigma_8(0.57)$	$0.607^{+0.014}_{-0.014} \quad (+0.1\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.871^{+0.024}_{-0.022} \quad (-0.6\sigma)$	$Y_P^{BBN}$	$0.24630^{+0.00013}_{-0.00014} \quad (-4.9\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1222^{+37}_{-34} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.6\sigma)$
$A_{100}^{dust}$	$0.99^{+0.37}_{-0.39}$	$D_{220}$	$5709^{+76}_{-77} \quad (-0.3\sigma)$	$f_{2000}^{217}$	$106.2^{+4.0}_{-4.1} \quad (-0.0\sigma)$
$A_{143}^{dust}$	$1.03^{+0.35}_{-0.36}$	$D_{810}$	$2529^{+26}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.6\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$D_{1420}$	$814.7^{+9.8}_{-9.3} \quad (+0.1\sigma)$	$\chi_{lensing}^2$	$9.96 \quad (\nu: 1.2) \quad (-0.3\sigma)$
$A_{143 \times 217}^{dust}$	$0.99^{+0.35}_{-0.36}$	$n_{s,0.002}$	$0.970^{+0.041}_{-0.042} \quad (-0.1\sigma)$	$\chi_{lowTEB}^2$	$10495.3 \quad (\nu: 2.3) \quad (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.24497^{+0.00014}_{-0.00013} \quad (-5.0\sigma)$	$\chi_{CamSpec}^2$	$12954.6 \quad (\nu: 18.6)$
$c_{217}$	$0.9971^{+0.0034}_{-0.0033} \quad (+0.7\sigma)$	$Age/Gyr$	$13.792^{+0.050}_{-0.049} \quad (-0.5\sigma)$	$\chi_{prior}^2$	$9.1 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{TE}$	$1.0051^{+0.0090}_{-0.0089}$	$z_*$	$1089.79^{+0.58}_{-0.56} \quad (-0.6\sigma)$	$\chi_{CMB}^2$	$23459.9 \quad (\nu: 18.6) \quad (+1522.1\sigma)$

$$\bar{\chi}_{eff}^2 = 23468.94; \Delta\bar{\chi}_{eff}^2 = 10488.88; R - 1 = 0.01694$$

## 17.26 base\_nrun\_CamSpecHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02241^{+0.00032}_{-0.00033} \quad (+0.6\sigma)$	$c_{EE}$	$1.0007^{+0.0085}_{-0.0084}$	$r_*$	$144.68^{+0.63}_{-0.65} \quad (+0.3\sigma)$
$\Omega_c h^2$	$0.1189^{+0.0028}_{-0.0027} \quad (-0.4\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$100\theta_*$	$1.04106^{+0.00057}_{-0.00060} \quad (+0.2\sigma)$
$100\theta_{MC}$	$1.04087^{+0.00057}_{-0.00061} \quad (+0.2\sigma)$	$H_0$	$67.8^{+1.3}_{-1.3} \quad (+0.5\sigma)$	$z_{drag}$	$1059.94^{+0.69}_{-0.65} \quad (+0.5\sigma)$
$\tau$	$0.082^{+0.037}_{-0.036} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.691^{+0.017}_{-0.017} \quad (+0.5\sigma)$	$r_{drag}$	$147.34^{+0.64}_{-0.65} \quad (+0.2\sigma)$
$\ln(10^{10} A_s)$	$3.096^{+0.073}_{-0.071} \quad (-0.3\sigma)$	$\Omega_m$	$0.309^{+0.017}_{-0.017} \quad (-0.5\sigma)$	$k_D$	$0.14066^{+0.00072}_{-0.00070} \quad (+0.1\sigma)$
$n_s$	$0.9682^{+0.0097}_{-0.0096} \quad (+0.7\sigma)$	$\Omega_m h^2$	$0.1420^{+0.0027}_{-0.0026} \quad (-0.4\sigma)$	$100\theta_D$	$0.16071^{+0.00039}_{-0.00039} \quad (-0.6\sigma)$
$dn_s/d \ln k$	$-0.003^{+0.014}_{-0.014} \quad (+0.3\sigma)$	$\Omega_m h^3$	$0.09619^{+0.00062}_{-0.00063} \quad (+0.3\sigma)$	$z_{eq}$	$3377^{+64}_{-63} \quad (-0.4\sigma)$
$y_{cal}$	$1.0003^{+0.0048}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8$	$0.829^{+0.028}_{-0.028} \quad (-0.4\sigma)$	$100\theta_{eq}$	$0.818^{+0.012}_{-0.012} \quad (+0.4\sigma)$
$A_{100}^{PS}$	$245^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.461^{+0.019}_{-0.020} \quad (-0.6\sigma)$	$r_{drag}/D_V(0.57)$	$0.07168^{+0.00096}_{-0.00095} \quad (+0.5\sigma)$
$A_{143}^{PS}$	$39^{+20}_{-20} \quad (-0.8\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.618^{+0.022}_{-0.022} \quad (-0.5\sigma)$	$H(0.57)$	$93.10^{+0.56}_{-0.54} \quad (+0.5\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.007^{+0.034}_{-0.035} \quad (-0.5\sigma)$	$D_A(0.57)$	$1385^{+17}_{-17} \quad (-0.5\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.484^{+0.077}_{-0.080} \quad (-0.5\sigma)$	$F_{AP}(0.57)$	$0.6755^{+0.0044}_{-0.0042} \quad (-0.5\sigma)$
$A_{143}^{tSZ}$	$< 6.72 \quad (-0.9\sigma)$	$z_{re}$	$10.2^{+3.1}_{-3.3} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.481^{+0.017}_{-0.017} \quad (-0.5\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.23}_{-0.21}$	$10^9 A_s$	$2.21^{+0.16}_{-0.15} \quad (-0.3\sigma)$	$\sigma_8(0.57)$	$0.617^{+0.022}_{-0.021} \quad (-0.2\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.875^{+0.024}_{-0.024} \quad (-0.7\sigma)$	$Y_P^{BBN}$	$0.24632^{+0.00013}_{-0.00014} \quad (-5.0\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1223^{+36}_{-35} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.6\sigma)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.39}$	$D_{220}$	$5713^{+77}_{-76} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.2^{+4.0}_{-4.1} \quad (-0.1\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2531^{+27}_{-26} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$D_{1420}$	$814.5^{+9.8}_{-9.4} \quad (+0.2\sigma)$	$\chi_{lowTEB}^2$	$10496.1 \quad (\nu: 3.4) \quad (-0.2\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.979^{+0.043}_{-0.043} \quad (-0.2\sigma)$	$\chi_{CamSpec}^2$	$12953.7 \quad (\nu: 19.4)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.7\sigma)$	$Y_P$	$0.24499^{+0.00014}_{-0.00014} \quad (-5.0\sigma)$	$\chi_{H070p6}^2$	$0.77 \quad (\nu: 0.1) \quad (-0.5\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0034} \quad (+0.7\sigma)$	$Age/Gyr$	$13.790^{+0.051}_{-0.050} \quad (-0.5\sigma)$	$\chi_{prior}^2$	$8.9 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{TE}$	$1.0038^{+0.0091}_{-0.0089}$	$z_*$	$1089.76^{+0.57}_{-0.56} \quad (-0.6\sigma)$	$\chi_{CMB}^2$	$23449.8 \quad (\nu: 18.6) \quad (+1552.2\sigma)$

$$\bar{\chi}_{eff}^2 = 23459.44; \Delta \bar{\chi}_{eff}^2 = 10490.41; R - 1 = 0.00871$$

# 17.27 base\_nrun\_CamSpecHM\_TTTEEE\_lowTEB\_post\_lensing\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00030}_{-0.00029} \quad (+0.5\sigma)$	$\Omega_\Lambda$	$0.693^{+0.012}_{-0.012} \quad (+0.3\sigma)$	$z_{\text{eq}}$	$3366^{+44}_{-45} \quad (-0.2\sigma)$
$\Omega_c h^2$	$0.1185^{+0.0020}_{-0.0020} \quad (-0.2\sigma)$	$\Omega_m$	$0.307^{+0.012}_{-0.012} \quad (-0.3\sigma)$	$100\theta_{\text{eq}}$	$0.8198^{+0.0086}_{-0.0084} \quad (+0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04093^{+0.00055}_{-0.00054} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1415^{+0.0018}_{-0.0019} \quad (-0.2\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07182^{+0.00066}_{-0.00066} \quad (+0.2\sigma)$
$\tau$	$0.068^{+0.024}_{-0.023} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.09610^{+0.00061}_{-0.00062} \quad (+0.3\sigma)$	$H(0.57)$	$93.14^{+0.42}_{-0.42} \quad (+0.4\sigma)$
$\ln(10^{10} A_s)$	$3.064^{+0.046}_{-0.046} \quad (-0.0\sigma)$	$\sigma_8$	$0.815^{+0.017}_{-0.018} \quad (-0.0\sigma)$	$D_A(0.57)$	$1384^{+12}_{-12} \quad (-0.3\sigma)$
$n_s$	$0.9691^{+0.0083}_{-0.0083} \quad (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.012}_{-0.012} \quad (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.6749^{+0.0030}_{-0.0030} \quad (-0.3\sigma)$
$dn_s/d \ln k$	$0.000^{+0.013}_{-0.013} \quad (+0.2\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.013}_{-0.013} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.4728^{+0.0098}_{-0.0099} \quad (-0.1\sigma)$
$y_{\text{cal}}$	$1.0001^{+0.0048}_{-0.0046} \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$0.989^{+0.020}_{-0.021} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.608^{+0.013}_{-0.014} \quad (+0.0\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-40} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.444^{+0.051}_{-0.052} \quad (-0.2\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24631^{+0.00012}_{-0.00013} \quad (-5.8\sigma)$
$A_{143}^{\text{PS}}$	$38^{+20}_{-20} \quad (-0.7\sigma)$	$z_{\text{re}}$	$8.9^{+2.2}_{-2.3} \quad (+0.1\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.5\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s$	$2.14^{+0.10}_{-0.097} \quad (-0.0\sigma)$	$f_{2000}^{217}$	$106.2^{+4.1}_{-4.1} \quad (-0.0\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.022}_{-0.021} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.76 \quad (-1.0\sigma)$	$D_{40}$	$1221^{+37}_{-34} \quad (-0.2\sigma)$	$\chi_{\text{lensing}}^2$	$9.9 \quad (\nu: 1.1) \quad (-0.3\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.23}_{-0.22}$	$D_{220}$	$5710^{+75}_{-76} \quad (-0.4\sigma)$	$\chi_{\text{lowTEB}}^2$	$10495.2 \quad (\nu: 2.2) \quad (-0.1\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2529^{+26}_{-27} \quad (-0.3\sigma)$	$\chi_{\text{CamSpec}}^2$	$12954.4 \quad (\nu: 18.0)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$814.9^{+9.7}_{-9.3} \quad (+0.1\sigma)$	$\chi_{\text{H070p6}}^2$	$0.67 \quad (\nu: 0.0) \quad (-0.3\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.37}_{-0.39}$	$n_{s,0.002}$	$0.971^{+0.041}_{-0.042} \quad (-0.1\sigma)$	$\chi_{\text{JLA}}^2$	$706.66 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.35}_{-0.36}$	$Y_{\text{P}}$	$0.24498^{+0.00013}_{-0.00012} \quad (-5.8\sigma)$	$\chi_{6\text{DF}}^2$	$0.030 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$\text{Age/Gyr}$	$13.789^{+0.042}_{-0.041} \quad (-0.4\sigma)$	$\chi_{\text{MGS}}^2$	$1.55 \quad (\nu: 0.1) \quad (+0.2\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.36}$	$z_*$	$1089.74^{+0.46}_{-0.46} \quad (-0.6\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.70 \quad (\nu: 0.1) \quad (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0020} \quad (-1.8\sigma)$	$r_*$	$144.81^{+0.48}_{-0.46} \quad (+0.0\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.49 \quad (\nu: 0.1) \quad (-0.2\sigma)$
$c_{217}$	$0.9971^{+0.0033}_{-0.0033} \quad (+0.7\sigma)$	$100\theta_*$	$1.04112^{+0.00051}_{-0.00053} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$9.0 \quad (\nu: 6.3) \quad (-1.9\sigma)$
$c_{TE}$	$1.0051^{+0.0091}_{-0.0089}$	$z_{\text{drag}}$	$1059.86^{+0.64}_{-0.61} \quad (+0.4\sigma)$	$\chi_{\text{CMB}}^2$	$23459.5 \quad (\nu: 17.7) \quad (+1539.0\sigma)$
$c_{EE}$	$1.0014^{+0.0086}_{-0.0079}$	$r_{\text{drag}}$	$147.47^{+0.50}_{-0.49} \quad (-0.1\sigma)$	$\chi_{\text{BAO}}^2$	$4.77 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$k_{\text{D}}$	$0.14050^{+0.00060}_{-0.00063} \quad (+0.3\sigma)$		
$H_0$	$67.91^{+0.88}_{-0.90} \quad (+0.3\sigma)$	$100\theta_{\text{D}}$	$0.16076^{+0.00037}_{-0.00037} \quad (-0.6\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 24180.59; \Delta\bar{\chi}_{\text{eff}}^2 = 10488.64; R - 1 = 0.01725$$

## 17.28 base\_nrun\_CamSpecHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00033}_{-0.00033} \quad (+0.6\sigma)$	$c_{EE}$	$1.0007^{+0.0085}_{-0.0085}$	$r_*$	$144.64^{+0.64}_{-0.65} \quad (+0.3\sigma)$
$\Omega_c h^2$	$0.1191^{+0.0029}_{-0.0028} \quad (-0.5\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	$1.04103^{+0.00057}_{-0.00060} \quad (+0.2\sigma)$
$100\theta_{MC}$	$1.04084^{+0.00058}_{-0.00060} \quad (+0.2\sigma)$	$H_0$	$67.7^{+1.3}_{-1.3} \quad (+0.5\sigma)$	$z_{drag}$	$1059.92^{+0.67}_{-0.67} \quad (+0.5\sigma)$
$\tau$	$0.082^{+0.034}_{-0.035} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.689^{+0.017}_{-0.018} \quad (+0.5\sigma)$	$r_{drag}$	$147.30^{+0.64}_{-0.67} \quad (+0.2\sigma)$
$\ln(10^{10} A_s)$	$3.095^{+0.069}_{-0.068} \quad (-0.3\sigma)$	$\Omega_m$	$0.311^{+0.018}_{-0.017} \quad (-0.5\sigma)$	$k_D$	$0.14068^{+0.00074}_{-0.00071} \quad (+0.1\sigma)$
$n_s$	$0.9677^{+0.0098}_{-0.0096} \quad (+0.8\sigma)$	$\Omega_m h^2$	$0.1422^{+0.0027}_{-0.0026} \quad (-0.4\sigma)$	$100\theta_D$	$0.16072^{+0.00039}_{-0.00039} \quad (-0.6\sigma)$
$dn_s/d \ln k$	$-0.003^{+0.014}_{-0.014} \quad (+0.3\sigma)$	$\Omega_m h^3$	$0.09618^{+0.00062}_{-0.00063} \quad (+0.3\sigma)$	$z_{eq}$	$3382^{+65}_{-63} \quad (-0.4\sigma)$
$y_{cal}$	$1.0003^{+0.0048}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8$	$0.829^{+0.027}_{-0.025} \quad (-0.4\sigma)$	$100\theta_{eq}$	$0.817^{+0.012}_{-0.012} \quad (+0.5\sigma)$
$A_{100}^{PS}$	$245^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.462^{+0.019}_{-0.019} \quad (-0.6\sigma)$	$r_{drag}/D_V(0.57)$	$0.07161^{+0.00097}_{-0.00096} \quad (+0.5\sigma)$
$A_{143}^{PS}$	$39^{+10}_{-20} \quad (-0.8\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.619^{+0.022}_{-0.021} \quad (-0.5\sigma)$	$H(0.57)$	$93.06^{+0.56}_{-0.54} \quad (+0.6\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.008^{+0.033}_{-0.033} \quad (-0.5\sigma)$	$D_A(0.57)$	$1387^{+17}_{-17} \quad (-0.5\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.486^{+0.075}_{-0.077} \quad (-0.6\sigma)$	$F_{AP}(0.57)$	$0.6758^{+0.0045}_{-0.0043} \quad (-0.5\sigma)$
$A_{143}^{tSZ}$	$< 6.69 \quad (-0.9\sigma)$	$z_{re}$	$10.2^{+3.0}_{-3.0} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.482^{+0.016}_{-0.016} \quad (-0.5\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.23}_{-0.21}$	$10^9 A_s$	$2.21^{+0.15}_{-0.15} \quad (-0.3\sigma)$	$\sigma_8(0.57)$	$0.617^{+0.021}_{-0.020} \quad (-0.2\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.876^{+0.024}_{-0.024} \quad (-0.7\sigma)$	$Y_P^{BBN}$	$0.24631^{+0.00014}_{-0.00014} \quad (-4.9\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1223^{+36}_{-35} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.6\sigma)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$D_{220}$	$5711^{+77}_{-76} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.2^{+4.0}_{-4.1} \quad (-0.1\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2531^{+27}_{-26} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.6\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$D_{1420}$	$814.3^{+9.8}_{-9.4} \quad (+0.2\sigma)$	$\chi_{lowTEB}^2$	$10496.1 \quad (\nu: 3.4) \quad (-0.2\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.979^{+0.043}_{-0.043} \quad (-0.2\sigma)$	$\chi_{CamSpec}^2$	$12953.6 \quad (\nu: 19.1)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.24498^{+0.00015}_{-0.00014} \quad (-5.0\sigma)$	$\chi_{prior}^2$	$8.9 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0034} \quad (+0.7\sigma)$	$Age/Gyr$	$13.793^{+0.050}_{-0.050} \quad (-0.6\sigma)$	$\chi_{CMB}^2$	$23449.7 \quad (\nu: 18.3) \quad (+1560.6\sigma)$
$c_{TE}$	$1.0038^{+0.0090}_{-0.0089}$	$z_*$	$1089.80^{+0.59}_{-0.57} \quad (-0.7\sigma)$		

$$\bar{\chi}_{eff}^2 = 23458.55; \Delta \bar{\chi}_{eff}^2 = 10490.55; R - 1 = 0.00795$$

## 17.29 base\_nrun\_plikHM\_TE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022379	$0.02236^{+0.00049}_{-0.00050}$	$\sigma_8$	0.8068	$0.809^{+0.040}_{-0.038}$	$100\theta_*$	1.04127	$1.04120^{+0.00098}_{-0.0010}$
$\Omega_c h^2$	0.11827	$0.1182^{+0.0043}_{-0.0041}$	$\sigma_8 \Omega_m^{0.5}$	0.4458	$0.447^{+0.032}_{-0.030}$	$D_A/\text{Gpc}$	13.913	$13.918^{+0.091}_{-0.092}$
$100\theta_{\text{MC}}$	1.04108	$1.04101^{+0.00099}_{-0.0010}$	$\sigma_8 \Omega_m^{0.25}$	0.5997	$0.601^{+0.035}_{-0.033}$	$z_{\text{drag}}$	1059.82	$1059.8^{+1.1}_{-1.1}$
$\tau$	0.0613	$0.063^{+0.043}_{-0.041}$	$\sigma_8/h^{0.5}$	0.978	$0.981^{+0.053}_{-0.050}$	$r_{\text{drag}}$	147.54	$147.6^{+1.0}_{-1.0}$
$\ln(10^{10} A_s)$	3.048	$3.053^{+0.092}_{-0.089}$	$\langle d^2 \rangle^{1/2}$	2.407	$2.42^{+0.11}_{-0.11}$	$k_D$	0.14040	$0.1403^{+0.0011}_{-0.0012}$
$n_s$	0.9692	$0.970^{+0.027}_{-0.029}$	$z_{\text{re}}$	8.35	$8.4^{+4.2}_{-4.4}$	$100\theta_D$	0.16083	$0.16085^{+0.00063}_{-0.00060}$
$dn_s/d \ln k$	-0.0074	$-0.007^{+0.026}_{-0.026}$	$10^9 A_s$	2.107	$2.12^{+0.20}_{-0.20}$	$z_{\text{eq}}$	3361	$3359^{+97}_{-92}$
$y_{\text{cal}}$	0.9997	$1.0001^{+0.0050}_{-0.0051}$	$10^9 A_s e^{-2\tau}$	1.8642	$1.868^{+0.040}_{-0.040}$	$k_{\text{eq}}$	0.010258	$0.01025^{+0.00030}_{-0.00028}$
$A_{100}^{\text{dustTE}}$	0.141	$0.136^{+0.074}_{-0.075}$	$D_{40}$	1193.7	$1200^{+50}_{-48}$	$100\theta_{\text{eq}}$	0.8209	$0.821^{+0.018}_{-0.018}$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.133^{+0.057}_{-0.057}$	$D_{220}$	5676	$5688^{+110}_{-110}$	$100\theta_{s,\text{eq}}$	0.4533	$0.4536^{+0.0093}_{-0.0093}$
$A_{100 \times 217}^{\text{dustTE}}$	0.289	$0.30^{+0.16}_{-0.17}$	$D_{810}$	2521	$2526^{+51}_{-51}$	$r_{\text{drag}}/D_V(0.57)$	0.07193	$0.0719^{+0.0014}_{-0.0014}$
$A_{143}^{\text{dustTE}}$	0.145	$0.15^{+0.11}_{-0.10}$	$D_{1420}$	810.5	$812^{+28}_{-28}$	$H(0.57)$	93.19	$93.18^{+0.84}_{-0.81}$
$A_{143 \times 217}^{\text{dustTE}}$	0.325	$0.33^{+0.16}_{-0.16}$	$D_{2000}$	228.5	$229^{+11}_{-11}$	$D_A(0.57)$	1381.9	$1382^{+25}_{-24}$
$A_{217}^{\text{dustTE}}$	1.635	$1.65^{+0.49}_{-0.50}$	$n_{s,0.002}$	0.993	$0.991^{+0.068}_{-0.069}$	$F_{\text{AP}}(0.57)$	0.6744	$0.6745^{+0.0066}_{-0.0062}$
$c_{100}$	0.99922	$0.9993^{+0.0020}_{-0.0019}$	$Y_{\text{P}}$	0.245397	$0.24539^{+0.00022}_{-0.00023}$	$f\sigma_8(0.57)$	0.4675	$0.469^{+0.026}_{-0.024}$
$H_0$	68.03	$68.0^{+1.9}_{-1.9}$	$Y_{\text{P}}^{\text{BBN}}$	0.246723	$0.24671^{+0.00022}_{-0.00023}$	$\sigma_8(0.57)$	0.6017	$0.603^{+0.029}_{-0.028}$
$\Omega_\Lambda$	0.6947	$0.695^{+0.024}_{-0.026}$	$10^5 \text{D}/\text{H}$	2.590	$2.594^{+0.096}_{-0.091}$	$\chi_{\text{lowTEB}}^2$	10492.49	$10494.4 (\nu: 2.5)$
$\Omega_m$	0.3053	$0.305^{+0.026}_{-0.024}$	$\text{Age}/\text{Gyr}$	13.784	$13.788^{+0.078}_{-0.077}$	$\chi_{\text{plikTE}}^2$	932.6	$939.5 (\nu: 8.6)$
$\Omega_m h^2$	0.14129	$0.1412^{+0.0041}_{-0.0039}$	$z_*$	1089.76	$1089.78^{+0.87}_{-0.82}$	$\chi_{\text{prior}}^2$	1.9	$7.9 (\nu: 6.5)$
$\Omega_m h^3$	0.09612	$0.0960^{+0.0010}_{-0.0010}$	$r_*$	144.87	$144.91^{+0.98}_{-0.98}$	$\chi_{\text{CMB}}^2$	11425.0	$11433.9 (\nu: 9.2)$

Best-fit  $\chi_{\text{eff}}^2 = 11426.94$ ;  $\bar{\chi}_{\text{eff}}^2 = 11441.78$ ;  $R - 1 = 0.00865$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10492.49 plik\_dx11dr2\_HM\_v18\_TE: 932.55

### 17.30 base\_nrun\_plikHM\_EE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02406	$0.0243^{+0.0026}_{-0.0025}$	$\sigma_8 \Omega_m^{0.5}$	0.429	$0.426^{+0.069}_{-0.067}$	$D_A/\text{Gpc}$	13.894	$13.89^{+0.16}_{-0.15}$
$\Omega_c h^2$	0.1149	$0.1144^{+0.0099}_{-0.0092}$	$\sigma_8 \Omega_m^{0.25}$	0.588	$0.585^{+0.064}_{-0.061}$	$z_{\text{drag}}$	1063.4	$1063.7^{+5.1}_{-5.1}$
$100\theta_{\text{MC}}$	1.03977	$1.0399^{+0.0018}_{-0.0018}$	$\sigma_8/h^{0.5}$	0.962	$0.957^{+0.093}_{-0.090}$	$r_{\text{drag}}$	146.59	$146.5^{+1.9}_{-1.8}$
$\tau$	0.0766	$0.077^{+0.050}_{-0.046}$	$\langle d^2 \rangle^{1/2}$	2.404	$2.40^{+0.19}_{-0.18}$	$k_D$	0.14256	$0.1427^{+0.0030}_{-0.0031}$
$\ln(10^{10} A_s)$	3.105	$3.10^{+0.11}_{-0.11}$	$z_{\text{re}}$	9.27	$9.1^{+4.0}_{-4.4}$	$100\theta_D$	0.15861	$0.1585^{+0.0027}_{-0.0026}$
$n_s$	0.9699	$0.973^{+0.039}_{-0.037}$	$10^9 A_s$	2.231	$2.23^{+0.25}_{-0.24}$	$z_{\text{eq}}$	3320	$3313^{+190}_{-180}$
$dn_s/d \ln k$	-0.0200	$-0.019^{+0.034}_{-0.034}$	$10^9 A_s e^{-2\tau}$	1.914	$1.914^{+0.063}_{-0.063}$	$k_{\text{eq}}$	0.01013	$0.01011^{+0.00059}_{-0.00055}$
$y_{\text{cal}}$	1.00012	$1.0000^{+0.0048}_{-0.0048}$	$D_{40}$	1215	$1216^{+59}_{-56}$	$100\theta_{\text{eq}}$	0.8322	$0.835^{+0.041}_{-0.040}$
$A_{100}^{\text{dustEE}}$	0.0825	$0.082^{+0.012}_{-0.012}$	$D_{220}$	6021	$6041^{+420}_{-420}$	$100\theta_{s,\text{eq}}$	0.4579	$0.459^{+0.020}_{-0.020}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0494	$0.050^{+0.010}_{-0.010}$	$D_{810}$	2594	$2596^{+80}_{-83}$	$r_{\text{drag}}/D_V(0.57)$	0.07291	$0.0732^{+0.0037}_{-0.0035}$
$A_{100 \times 217}^{\text{dustEE}}$	0.101	$0.099^{+0.064}_{-0.063}$	$D_{1420}$	835.4	$837^{+41}_{-41}$	$H(0.57)$	94.54	$94.9^{+3.3}_{-3.2}$
$A_{143}^{\text{dustEE}}$	0.1001	$0.101^{+0.014}_{-0.014}$	$D_{2000}$	237.1	$238^{+17}_{-16}$	$D_A(0.57)$	1351	$1345^{+76}_{-75}$
$A_{143 \times 217}^{\text{dustEE}}$	0.223	$0.224^{+0.092}_{-0.092}$	$n_{s,0.002}$	1.034	$1.034^{+0.089}_{-0.087}$	$F_{\text{AP}}(0.57)$	0.6687	$0.668^{+0.016}_{-0.016}$
$A_{217}^{\text{dustEE}}$	0.651	$0.65^{+0.26}_{-0.25}$	$Y_P$	0.24611	$0.24617^{+0.00099}_{-0.0010}$	$f\sigma_8(0.57)$	0.4611	$0.458^{+0.044}_{-0.044}$
$H_0$	70.2	$70.7^{+5.7}_{-5.5}$	$Y_P^{\text{BBN}}$	0.24743	$0.2475^{+0.0010}_{-0.0011}$	$\sigma_8(0.57)$	0.6070	$0.606^{+0.033}_{-0.031}$
$\Omega_\Lambda$	0.717	$0.719^{+0.059}_{-0.062}$	$10^5 D/H$	2.304	$2.29^{+0.40}_{-0.39}$	$\chi_{\text{lowTEB}}^2$	10492.67	$10494.6 (\nu: 2.3)$
$\Omega_m$	0.283	$0.281^{+0.062}_{-0.059}$	Age/Gyr	13.639	$13.61^{+0.30}_{-0.32}$	$\chi_{\text{plikEE}}^2$	751.0	$758.7 (\nu: 10.2)$
$\Omega_m h^2$	0.1396	$0.1393^{+0.0081}_{-0.0075}$	$z_*$	1087.51	$1087.3^{+3.4}_{-3.4}$	$\chi_{\text{prior}}^2$	3.9	$8.3 (\nu: 6.1)$
$\Omega_m h^3$	0.09801	$0.0983^{+0.0041}_{-0.0037}$	$r_*$	144.46	$144.5^{+1.6}_{-1.6}$	$\chi_{\text{CMB}}^2$	11243.7	$11253.3 (\nu: 12.1)$
$\sigma_8$	0.806	$0.804^{+0.053}_{-0.053}$	$100\theta_*$	1.03978	$1.0399^{+0.0018}_{-0.0018}$			

Best-fit  $\chi_{\text{eff}}^2 = 11247.58$ ;  $\bar{\chi}_{\text{eff}}^2 = 11261.59$ ;  $R - 1 = 0.00766$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10492.67 plik\_dx11dr2\_HM\_v18\_EE: 751.02



### 17.31 base\_nrun\_CamSpecHM\_TE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02237	$0.02237^{+0.00050}_{-0.00051}$ (+0.1 $\sigma$ )	$\sigma_8/h^{0.5}$	0.973	$0.971^{+0.054}_{-0.054}$ (−0.4 $\sigma$ )	$k_D$	0.13996	$0.1399^{+0.0012}_{-0.0012}$ (−0.7 $\sigma$ )
$\Omega_c h^2$	0.11668	$0.1166^{+0.0042}_{-0.0042}$ (−0.7 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.381	$2.38^{+0.11}_{-0.11}$ (−0.6 $\sigma$ )	$100\theta_D$	0.16090	$0.16091^{+0.00065}_{-0.00062}$ (+0.2 $\sigma$ )
$100\theta_{MC}$	1.04129	$1.04130^{+0.00096}_{-0.00097}$ (+0.6 $\sigma$ )	$z_{re}$	8.84	$8.7^{+4.3}_{-4.4}$ (+0.1 $\sigma$ )	$z_{eq}$	3323	$3321^{+97}_{-97}$ (−0.8 $\sigma$ )
$\tau$	0.0668	$0.067^{+0.046}_{-0.043}$ (+0.2 $\sigma$ )	$10^9 A_s$	2.117	$2.12^{+0.21}_{-0.21}$ (−0.0 $\sigma$ )	$100\theta_{eq}$	0.8280	$0.828^{+0.019}_{-0.018}$ (+0.8 $\sigma$ )
$\ln(10^{10} A_s)$	3.053	$3.05^{+0.10}_{-0.095}$ (−0.0 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.853	$1.851^{+0.056}_{-0.056}$ (−0.8 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07247	$0.0725^{+0.0015}_{-0.0014}$ (+0.8 $\sigma$ )
$n_s$	0.9772	$0.977^{+0.027}_{-0.027}$ (+0.5 $\sigma$ )	$D_{40}$	1173.7	$1173^{+50}_{-47}$ (−1.1 $\sigma$ )	$H(0.57)$	93.41	$93.43^{+0.87}_{-0.80}$ (+0.6 $\sigma$ )
$dn_s/d \ln k$	−0.0072	$−0.008^{+0.026}_{-0.026}$ (−0.1 $\sigma$ )	$D_{220}$	5637	$5635^{+150}_{-150}$ (−0.9 $\sigma$ )	$D_A(0.57)$	1374.0	$1374^{+24}_{-25}$ (−0.7 $\sigma$ )
$y_{cal}$	1.00012	$0.99999^{+0.0047}_{-0.0049}$ (−0.0 $\sigma$ )	$D_{810}$	2517	$2514^{+73}_{-73}$ (−0.5 $\sigma$ )	$F_{AP}(0.57)$	0.6721	$0.6721^{+0.0064}_{-0.0062}$ (−0.7 $\sigma$ )
$c_{TE}$	0.9995	$0.999^{+0.019}_{-0.019}$	$D_{1420}$	811.9	$811^{+32}_{-32}$ (−0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4646	$0.464^{+0.026}_{-0.026}$ (−0.4 $\sigma$ )
$H_0$	68.66	$68.7^{+1.9}_{-1.9}$ (+0.7 $\sigma$ )	$n_{s,0.002}$	1.000	$1.003^{+0.069}_{-0.069}$ (+0.3 $\sigma$ )	$\sigma_8(0.57)$	0.6033	$0.603^{+0.031}_{-0.029}$ (−0.1 $\sigma$ )
$\Omega_\Lambda$	0.7037	$0.704^{+0.024}_{-0.025}$ (+0.7 $\sigma$ )	$Y_P$	0.244972	$0.24498^{+0.00021}_{-0.00021}$ (−3.6 $\sigma$ )	$Y_P^{BBN}$	0.246304	$0.24630^{+0.00021}_{-0.00022}$ (−3.6 $\sigma$ )
$\Omega_m$	0.2963	$0.296^{+0.025}_{-0.024}$ (−0.7 $\sigma$ )	Age/Gyr	13.772	$13.771^{+0.075}_{-0.076}$ (−0.4 $\sigma$ )	$\chi^2_{lowTEB}$	10491.77	$10493.4$ ( $\nu$ : 1.4) (−0.4 $\sigma$ )
$\Omega_m h^2$	0.13970	$0.1396^{+0.0041}_{-0.0041}$ (−0.8 $\sigma$ )	$z_*$	1089.61	$1089.60^{+0.84}_{-0.82}$ (−0.4 $\sigma$ )	$\chi^2_{CamSpec}$	2694.7	$2700.1$ ( $\nu$ : 5.4)
$\Omega_m h^3$	0.09592	$0.0959^{+0.0010}_{-0.0011}$ (−0.2 $\sigma$ )	$r_*$	145.30	$145.3^{+1.0}_{-1.0}$ (+0.8 $\sigma$ )	$\chi^2_{prior}$	10.03	$12.0$ ( $\nu$ : 1.9) (+1.1 $\sigma$ )
$\sigma_8$	0.8060	$0.805^{+0.042}_{-0.041}$ (−0.2 $\sigma$ )	$100\theta_*$	1.04149	$1.04149^{+0.00094}_{-0.00097}$ (+0.6 $\sigma$ )	$\chi^2_{CMB}$	13186.5	$13193.5$ ( $\nu$ : 7.0) (+409.9 $\sigma$ )
$\sigma_8 \Omega_m^{0.5}$	0.4388	$0.438^{+0.031}_{-0.031}$ (−0.6 $\sigma$ )	$z_{drag}$	1059.70	$1059.7^{+1.1}_{-1.1}$ (−0.2 $\sigma$ )			
$\sigma_8 \Omega_m^{0.25}$	0.5947	$0.594^{+0.035}_{-0.035}$ (−0.4 $\sigma$ )	$r_{drag}$	147.97	$148.0^{+1.1}_{-1.0}$ (+0.8 $\sigma$ )			

Best-fit  $\chi^2_{eff} = 13196.52$ ;  $\Delta\chi^2_{eff} = 1769.59$ ;  $\bar{\chi}^2_{eff} = 13205.50$ ;  $\Delta\bar{\chi}^2_{eff} = 1763.72$ ;  $R - 1 = 0.00874$

$\chi^2_{eff}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10491.77 ( $\Delta$  -0.71) CamSpec like\_v9.10CMH\_unified: 2694.72

### 17.32 base\_nrun\_CamSpecHM\_EE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02440	$0.0244^{+0.0022}_{-0.0020}$ (+0.1 $\sigma$ )	$\sigma_8/h^{0.5}$	0.961	$0.963^{+0.077}_{-0.078}$ (+0.1 $\sigma$ )	$k_D$	0.14363	$0.1436^{+0.0024}_{-0.0025}$ (+0.6 $\sigma$ )
$\Omega_c h^2$	0.1164	$0.1165^{+0.0080}_{-0.0078}$ (+0.4 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.421	$2.42^{+0.16}_{-0.16}$ (+0.3 $\sigma$ )	$100\theta_D$	0.15814	$0.1582^{+0.0022}_{-0.0021}$ (-0.3 $\sigma$ )
$100\theta_{MC}$	1.03971	$1.0397^{+0.0014}_{-0.0015}$ (-0.2 $\sigma$ )	$z_{re}$	8.78	$8.8^{+4.1}_{-4.4}$ (-0.2 $\sigma$ )	$z_{eq}$	3365	$3368^{+160}_{-150}$ (+0.6 $\sigma$ )
$\tau$	0.0716	$0.073^{+0.047}_{-0.047}$ (-0.2 $\sigma$ )	$10^9 A_s$	2.213	$2.22^{+0.24}_{-0.23}$ (-0.1 $\sigma$ )	$100\theta_{eq}$	0.8246	$0.825^{+0.033}_{-0.032}$ (-0.5 $\sigma$ )
$\ln(10^{10} A_s)$	3.097	$3.10^{+0.11}_{-0.10}$ (-0.1 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.918	$1.918^{+0.066}_{-0.064}$ (+0.1 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07246	$0.0725^{+0.0030}_{-0.0028}$ (-0.4 $\sigma$ )
$n_s$	0.9592	$0.960^{+0.030}_{-0.030}$ (-0.6 $\sigma$ )	$D_{40}$	1230	$1227^{+55}_{-51}$ (+0.4 $\sigma$ )	$H(0.57)$	94.60	$94.7^{+2.6}_{-2.5}$ (-0.1 $\sigma$ )
$dn_s/d \ln k$	-0.0239	$-0.025^{+0.030}_{-0.031}$ (-0.3 $\sigma$ )	$D_{220}$	6072	$6066^{+370}_{-380}$ (+0.1 $\sigma$ )	$D_A(0.57)$	1353	$1353^{+61}_{-61}$ (+0.2 $\sigma$ )
$y_{cal}$	1.0000	$1.0001^{+0.0050}_{-0.0051}$ (+0.0 $\sigma$ )	$D_{810}$	2586	$2586^{+83}_{-84}$ (-0.2 $\sigma$ )	$F_{AP}(0.57)$	0.6704	$0.671^{+0.013}_{-0.013}$ (+0.3 $\sigma$ )
$c_{EE}$	0.9986	$0.999^{+0.020}_{-0.019}$	$D_{1420}$	829.3	$829^{+35}_{-35}$ (-0.4 $\sigma$ )	$f\sigma_8(0.57)$	0.4613	$0.462^{+0.036}_{-0.037}$ (+0.2 $\sigma$ )
$H_0$	69.91	$69.9^{+4.6}_{-4.4}$ (-0.3 $\sigma$ )	$n_{s,0.002}$	1.036	$1.039^{+0.083}_{-0.081}$ (+0.1 $\sigma$ )	$\sigma_8(0.57)$	0.6033	$0.604^{+0.030}_{-0.030}$ (-0.1 $\sigma$ )
$\Omega_\Lambda$	0.711	$0.709^{+0.051}_{-0.051}$ (-0.3 $\sigma$ )	$Y_P$	0.24581	$0.24580^{+0.00080}_{-0.00082}$ (-0.7 $\sigma$ )	$Y_P^{BBN}$	0.24713	$0.24712^{+0.00081}_{-0.00081}$ (-0.7 $\sigma$ )
$\Omega_m$	0.289	$0.291^{+0.051}_{-0.051}$ (+0.3 $\sigma$ )	Age/Gyr	13.614	$13.61^{+0.25}_{-0.25}$ (+0.0 $\sigma$ )	$\chi^2_{lowTEB}$	10493.04	$10494.7$ ( $\nu$ : 1.9) (+0.1 $\sigma$ )
$\Omega_m h^2$	0.1415	$0.1416^{+0.0065}_{-0.0064}$ (+0.6 $\sigma$ )	$z_*$	1087.26	$1087.3^{+2.8}_{-2.6}$ (-0.0 $\sigma$ )	$\chi^2_{CamSpec}$	2186.1	$2191.5$ ( $\nu$ : 5.3)
$\Omega_m h^3$	0.09891	$0.0989^{+0.0033}_{-0.0031}$ (+0.3 $\sigma$ )	$r_*$	143.80	$143.8^{+1.3}_{-1.3}$ (-0.8 $\sigma$ )	$\chi^2_{prior}$	10.05	$12.1$ ( $\nu$ : 2.1) (+1.1 $\sigma$ )
$\sigma_8$	0.8036	$0.805^{+0.047}_{-0.047}$ (+0.0 $\sigma$ )	$100\theta_*$	1.03969	$1.0397^{+0.0014}_{-0.0014}$ (-0.2 $\sigma$ )	$\chi^2_{CMB}$	12679.1	$12686.2$ ( $\nu$ : 6.8) (+291.1 $\sigma$ )
$\sigma_8 \Omega_m^{0.5}$	0.432	$0.434^{+0.056}_{-0.054}$ (+0.2 $\sigma$ )	$z_{drag}$	1064.20	$1064.2^{+4.2}_{-4.1}$ (+0.2 $\sigma$ )			
$\sigma_8 \Omega_m^{0.25}$	0.589	$0.591^{+0.053}_{-0.053}$ (+0.2 $\sigma$ )	$r_{drag}$	145.82	$145.8^{+1.5}_{-1.5}$ (-0.8 $\sigma$ )			

Best-fit  $\chi^2_{eff} = 12689.19$ ;  $\Delta\chi^2_{eff} = 1441.61$ ;  $\bar{\chi}^2_{eff} = 12698.31$ ;  $\Delta\bar{\chi}^2_{eff} = 1436.72$ ;  $R - 1 = 0.00988$

$\chi^2_{eff}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.04 ( $\Delta$  0.37) CamSpec like\_v9.10CMH\_unified: 2186.10

### 17.33 base\_nrun\_plikHM\_TE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02231	$0.02231^{+0.00051}_{-0.00050}$	$\sigma_8$	0.8070	$0.802^{+0.034}_{-0.033}$	$100\theta_*$	1.04117	$1.04118^{+0.00097}_{-0.00099}$
$\Omega_c h^2$	0.11790	$0.1179^{+0.0043}_{-0.0043}$	$\sigma_8 \Omega_m^{0.5}$	0.4450	$0.442^{+0.030}_{-0.029}$	$D_A/\text{Gpc}$	13.928	$13.928^{+0.095}_{-0.094}$
$100\theta_{\text{MC}}$	1.04099	$1.04099^{+0.00099}_{-0.0010}$	$\sigma_8 \Omega_m^{0.25}$	0.5992	$0.596^{+0.031}_{-0.030}$	$z_{\text{drag}}$	1059.67	$1059.6^{+1.1}_{-1.0}$
$\tau$	0.0523	$0.048^{+0.032}_{-0.038}$	$\sigma_8/h^{0.5}$	0.9782	$0.972^{+0.046}_{-0.045}$	$r_{\text{drag}}$	147.71	$147.7^{+1.0}_{-1.0}$
$\ln(10^{10} A_s)$	3.024	$3.016^{+0.078}_{-0.078}$	$\langle d^2 \rangle^{1/2}$	2.453	$2.44^{+0.11}_{-0.11}$	$k_D$	0.14017	$0.1402^{+0.0012}_{-0.0011}$
$n_s$	0.9784	$0.976^{+0.031}_{-0.031}$	$z_{\text{re}}$	7.45	$6.9^{+3.6}_{-3.9}$	$100\theta_D$	0.16091	$0.16092^{+0.00064}_{-0.00062}$
$dn_s/d \ln k$	0.0334	$0.027^{+0.049}_{-0.049}$	$10^9 A_s$	2.057	$2.04^{+0.16}_{-0.16}$	$z_{\text{eq}}$	3351	$3351^{+98}_{-98}$
$y_{\text{cal}}$	1.00032	$1.0002^{+0.0048}_{-0.0050}$	$10^9 A_s e^{-2\tau}$	1.8527	$1.852^{+0.044}_{-0.043}$	$k_{\text{eq}}$	0.010227	$0.01023^{+0.00030}_{-0.00030}$
$A_{100}^{\text{dustTE}}$	0.136	$0.138^{+0.075}_{-0.073}$	$D_{40}$	1284	$1273^{+100}_{-98}$	$100\theta_{\text{eq}}$	0.8225	$0.823^{+0.019}_{-0.018}$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.134^{+0.057}_{-0.059}$	$D_{220}$	5709	$5704^{+110}_{-110}$	$100\theta_{s,\text{eq}}$	0.4542	$0.4543^{+0.0098}_{-0.0094}$
$A_{100 \times 217}^{\text{dustTE}}$	0.304	$0.30^{+0.17}_{-0.16}$	$D_{810}$	2521	$2517^{+52}_{-51}$	$r_{\text{drag}}/D_V(0.57)$	0.07200	$0.0720^{+0.0015}_{-0.0014}$
$A_{143}^{\text{dustTE}}$	0.152	$0.16^{+0.11}_{-0.11}$	$D_{1420}$	823.7	$820^{+32}_{-31}$	$H(0.57)$	93.16	$93.17^{+0.87}_{-0.81}$
$A_{143 \times 217}^{\text{dustTE}}$	0.351	$0.34^{+0.16}_{-0.16}$	$D_{2000}$	235.5	$234^{+14}_{-14}$	$D_A(0.57)$	1381.8	$1382^{+25}_{-25}$
$A_{217}^{\text{dustTE}}$	1.73	$1.66^{+0.51}_{-0.50}$	$n_{s,0.002}$	0.871	$0.89^{+0.14}_{-0.14}$	$F_{\text{AP}}(0.57)$	0.6741	$0.6742^{+0.0065}_{-0.0064}$
$c_{100}$	0.99922	$0.9992^{+0.0020}_{-0.0020}$	$Y_P$	0.245368	$0.24536^{+0.00023}_{-0.00023}$	$f\sigma_8(0.57)$	0.4673	$0.464^{+0.022}_{-0.022}$
$H_0$	68.07	$68.1^{+1.9}_{-1.9}$	$Y_P^{\text{BBN}}$	0.246694	$0.24669^{+0.00023}_{-0.00023}$	$\sigma_8(0.57)$	0.6022	$0.598^{+0.025}_{-0.023}$
$\Omega_\Lambda$	0.6960	$0.696^{+0.025}_{-0.026}$	$10^5 \text{D/H}$	2.602	$2.603^{+0.097}_{-0.096}$	$\chi^2_{\text{lowEB}}$	5430.76	$5431.6 (\nu: 0.7)$
$\Omega_m$	0.3040	$0.304^{+0.026}_{-0.025}$	$\text{Age/Gyr}$	13.792	$13.792^{+0.078}_{-0.078}$	$\chi^2_{\text{plikTE}}$	929.8	$938.0 (\nu: 8.5)$
$\Omega_m h^2$	0.14086	$0.1409^{+0.0041}_{-0.0041}$	$z_*$	1089.81	$1089.82^{+0.88}_{-0.87}$	$\chi^2_{\text{prior}}$	1.8	$7.8 (\nu: 6.8)$
$\Omega_m h^3$	0.09588	$0.0959^{+0.0011}_{-0.0010}$	$r_*$	145.02	$145.0^{+1.0}_{-1.0}$	$\chi^2_{\text{CMB}}$	6360.6	$6369.6 (\nu: 9.2)$

Best-fit  $\chi^2_{\text{eff}} = 6362.40$ ;  $\bar{\chi}^2_{\text{eff}} = 6377.41$ ;  $R - 1 = 0.00882$

$\chi^2_{\text{eff}}$ : CMB - lowl\_QU\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 5430.76 plik\_dx11dr2\_HM\_v18\_TE: 929.83

### 17.34 base\_nrun\_plikHM\_EE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02339	$0.0236^{+0.0029}_{-0.0028}$	$\sigma_8 \Omega_m^{0.5}$	0.424	$0.425^{+0.070}_{-0.065}$	$D_A/\text{Gpc}$	13.947	$13.93^{+0.18}_{-0.18}$
$\Omega_c h^2$	0.1146	$0.115^{+0.010}_{-0.010}$	$\sigma_8 \Omega_m^{0.25}$	0.581	$0.582^{+0.062}_{-0.061}$	$z_{\text{drag}}$	1061.9	$1062.2^{+5.9}_{-6.1}$
$100\theta_{\text{MC}}$	1.03992	$1.0399^{+0.0019}_{-0.0019}$	$\sigma_8/h^{0.5}$	0.952	$0.953^{+0.088}_{-0.088}$	$r_{\text{drag}}$	147.39	$147.2^{+2.3}_{-2.3}$
$\tau$	0.0506	$0.054^{+0.037}_{-0.043}$	$\langle d^2 \rangle^{1/2}$	2.414	$2.42^{+0.19}_{-0.18}$	$k_D$	0.14127	$0.1415^{+0.0038}_{-0.0040}$
$\ln(10^{10} A_s)$	3.037	$3.05^{+0.11}_{-0.10}$	$z_{\text{re}}$	7.01	$7.2^{+3.7}_{-4.1}$	$100\theta_D$	0.15945	$0.1594^{+0.0034}_{-0.0032}$
$n_s$	0.9822	$0.983^{+0.047}_{-0.043}$	$10^9 A_s$	2.084	$2.11^{+0.23}_{-0.21}$	$z_{\text{eq}}$	3298	$3303^{+200}_{-200}$
$dn_s/d \ln k$	0.029	$0.023^{+0.082}_{-0.083}$	$10^9 A_s e^{-2\tau}$	1.884	$1.889^{+0.082}_{-0.077}$	$k_{\text{eq}}$	0.01007	$0.01008^{+0.00060}_{-0.00060}$
$y_{\text{cal}}$	1.00017	$1.0001^{+0.0049}_{-0.0049}$	$D_{40}$	1299	$1291^{+100}_{-100}$	$100\theta_{\text{eq}}$	0.8345	$0.835^{+0.044}_{-0.041}$
$A_{100}^{\text{dustEE}}$	0.0790	$0.079^{+0.013}_{-0.013}$	$D_{220}$	5947	$5965^{+450}_{-470}$	$100\theta_{s,\text{eq}}$	0.4596	$0.460^{+0.022}_{-0.020}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0457	$0.046^{+0.012}_{-0.012}$	$D_{810}$	2574	$2578^{+89}_{-94}$	$r_{\text{drag}}/D_V(0.57)$	0.07293	$0.0730^{+0.0040}_{-0.0036}$
$A_{100 \times 217}^{\text{dustEE}}$	0.101	$0.099^{+0.065}_{-0.065}$	$D_{1420}$	844.4	$844^{+45}_{-43}$	$H(0.57)$	94.09	$94.3^{+3.5}_{-3.4}$
$A_{143}^{\text{dustEE}}$	0.0966	$0.097^{+0.015}_{-0.015}$	$D_{2000}$	242.6	$242^{+20}_{-19}$	$D_A(0.57)$	1358	$1355^{+82}_{-81}$
$A_{143 \times 217}^{\text{dustEE}}$	0.221	$0.223^{+0.093}_{-0.091}$	$n_{s,0.002}$	0.888	$0.91^{+0.24}_{-0.23}$	$F_{\text{AP}}(0.57)$	0.6691	$0.669^{+0.017}_{-0.016}$
$A_{217}^{\text{dustEE}}$	0.632	$0.65^{+0.26}_{-0.26}$	$Y_P$	0.24583	$0.2459^{+0.0011}_{-0.0012}$	$f\sigma_8(0.57)$	0.4552	$0.455^{+0.041}_{-0.043}$
$H_0$	69.8	$70.0^{+6.1}_{-5.8}$	$Y_P^{\text{BBN}}$	0.24716	$0.2472^{+0.0011}_{-0.0012}$	$\sigma_8(0.57)$	0.5983	$0.599^{+0.025}_{-0.026}$
$\Omega_\Lambda$	0.715	$0.715^{+0.064}_{-0.066}$	$10^5 D/H$	2.411	$2.40^{+0.50}_{-0.47}$	$\chi_{\text{lowEB}}^2$	5430.67	$5431.7 (\nu: 0.9)$
$\Omega_m$	0.285	$0.285^{+0.066}_{-0.064}$	Age/Gyr	13.701	$13.68^{+0.34}_{-0.35}$	$\chi_{\text{plikEE}}^2$	750.6	$759.2 (\nu: 10.5)$
$\Omega_m h^2$	0.1387	$0.1389^{+0.0082}_{-0.0083}$	$z_*$	1088.23	$1088.1^{+4.1}_{-3.9}$	$\chi_{\text{prior}}^2$	3.2	$7.6 (\nu: 5.9)$
$\Omega_m h^3$	0.09678	$0.0971^{+0.0046}_{-0.0043}$	$r_*$	145.05	$144.9^{+2.0}_{-1.9}$	$\chi_{\text{CMB}}^2$	6181.2	$6190.9 (\nu: 11.1)$
$\sigma_8$	0.7954	$0.797^{+0.045}_{-0.047}$	$100\theta_*$	1.04000	$1.0400^{+0.0018}_{-0.0018}$			

Best-fit  $\chi_{\text{eff}}^2 = 6184.41$ ;  $\bar{\chi}_{\text{eff}}^2 = 6198.47$ ;  $R - 1 = 0.00962$

$\chi_{\text{eff}}^2$ : CMB - lowl\_QU\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 5430.67 plik\_dx11dr2\_HM\_v18\_EE: 750.55

### 17.35 base\_nrun\_plikHM\_TT\_tau07

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02211	$0.02211^{+0.00052}_{-0.00054}$	$\Omega_\Lambda$	0.6790	$0.678^{+0.027}_{-0.029}$	$r_*$	144.46	$144.44^{+0.98}_{-0.99}$
$\Omega_c h^2$	0.12067	$0.1208^{+0.0044}_{-0.0043}$	$\Omega_m$	0.3210	$0.322^{+0.029}_{-0.027}$	$100\theta_*$	1.04096	$1.04095^{+0.00092}_{-0.00092}$
$100\theta_{MC}$	1.04076	$1.04074^{+0.00094}_{-0.00094}$	$\Omega_m h^2$	0.14343	$0.1435^{+0.0042}_{-0.0041}$	$D_A/\text{Gpc}$	13.877	$13.876^{+0.091}_{-0.092}$
$\tau$	0.0814	$0.081^{+0.037}_{-0.037}$	$\Omega_m h^3$	0.09588	$0.0959^{+0.0010}_{-0.0010}$	$z_{\text{drag}}$	1059.40	$1059.4^{+1.1}_{-1.1}$
$\ln(10^{10} A_s)$	3.098	$3.098^{+0.072}_{-0.072}$	$\sigma_8$	0.8372	$0.837^{+0.029}_{-0.028}$	$r_{\text{drag}}$	147.20	$147.19^{+0.99}_{-1.0}$
$n_s$	0.9632	$0.962^{+0.012}_{-0.012}$	$\sigma_8 \Omega_m^{0.5}$	0.4743	$0.475^{+0.028}_{-0.027}$	$k_D$	0.14055	$0.1406^{+0.0011}_{-0.0011}$
$dn_s/d \ln k$	0.0069	$0.006^{+0.019}_{-0.020}$	$\sigma_8 \Omega_m^{0.25}$	0.6301	$0.630^{+0.027}_{-0.026}$	$100\theta_D$	0.16107	$0.16108^{+0.00067}_{-0.00063}$
$A_{217}^{\text{CIB}}$	65.5	$63^{+10}_{-10}$	$\sigma_8/h^{0.5}$	1.0239	$1.024^{+0.040}_{-0.038}$	$z_{\text{eq}}$	3412	$3414^{+100}_{-97}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.12	—	$\langle d^2 \rangle^{1/2}$	2.541	$2.541^{+0.097}_{-0.095}$	$k_{\text{eq}}$	0.010414	$0.01042^{+0.00031}_{-0.00030}$
$A_{143}^{\text{tSZ}}$	7.18	$5.2^{+3.7}_{-3.8}$	$z_{\text{re}}$	10.35	$10.3^{+3.3}_{-3.4}$	$100\theta_{\text{eq}}$	0.8107	$0.810^{+0.019}_{-0.018}$
$A_{100}^{\text{PS}}$	251	$257^{+60}_{-50}$	$10^9 A_s$	2.215	$2.22^{+0.16}_{-0.16}$	$100\theta_{s,\text{eq}}$	0.4482	$0.4481^{+0.0095}_{-0.0094}$
$A_{143}^{\text{PS}}$	39.3	$43^{+20}_{-20}$	$10^9 A_s e^{-2\tau}$	1.8820	$1.883^{+0.029}_{-0.028}$	$r_{\text{drag}}/D_V(0.57)$	0.07108	$0.0711^{+0.0015}_{-0.0014}$
$A_{143 \times 217}^{\text{PS}}$	35.5	$39^{+20}_{-20}$	$D_{40}$	1263	$1263^{+56}_{-54}$	$H(0.57)$	92.67	$92.67^{+0.87}_{-0.82}$
$A_{217}^{\text{PS}}$	99.3	$98^{+20}_{-20}$	$D_{220}$	5721	$5723^{+80}_{-80}$	$D_A(0.57)$	1398.0	$1398^{+26}_{-26}$
$A^{\text{kSZ}}$	0.00	$< 8.23$	$D_{810}$	2532.0	$2532^{+27}_{-27}$	$F_{\text{AP}}(0.57)$	0.6784	$0.6786^{+0.0070}_{-0.0067}$
$A_{100}^{\text{dustTT}}$	7.27	$7.3^{+3.6}_{-3.7}$	$D_{1420}$	814.3	$814^{+10}_{-10}$	$f\sigma_8(0.57)$	0.4892	$0.489^{+0.019}_{-0.018}$
$A_{143}^{\text{dustTT}}$	8.95	$8.9^{+3.6}_{-3.6}$	$D_{2000}$	230.69	$230.4^{+3.8}_{-3.8}$	$\sigma_8(0.57)$	0.6205	$0.620^{+0.022}_{-0.021}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.0^{+8.2}_{-8.2}$	$n_{s,0.002}$	0.941	$0.944^{+0.063}_{-0.063}$	$f_{2000}^{143}$	28.9	$30^{+6}_{-6}$
$A_{217}^{\text{dustTT}}$	82.2	$82^{+10}_{-10}$	$Y_P$	0.245273	$0.24527^{+0.00023}_{-0.00025}$	$f_{2000}^{143 \times 217}$	31.77	$32^{+4}_{-4}$
$c_{100}$	0.99795	$0.9979^{+0.0015}_{-0.0015}$	$Y_P^{\text{BBN}}$	0.246599	$0.24660^{+0.00024}_{-0.00025}$	$f_{2000}^{217}$	105.46	$105.8^{+4.2}_{-4.2}$
$c_{217}$	0.99582	$0.9958^{+0.0028}_{-0.0028}$	$10^5 \text{D/H}$	2.641	$2.64^{+0.11}_{-0.099}$	$\chi_{\text{plik}}^2$	762.1	$777.0 (\nu: 15.9)$
$y_{\text{cal}}$	1.00018	$1.0002^{+0.0048}_{-0.0049}$	Age/Gyr	13.832	$13.832^{+0.082}_{-0.082}$	$\chi_{\text{prior}}^2$	2.2	$8.4 (\nu: 7.4)$
$H_0$	66.85	$66.8^{+2.0}_{-1.9}$	$z_*$	1090.31	$1090.32^{+0.95}_{-0.92}$			

Best-fit  $\chi_{\text{eff}}^2 = 764.38$ ;  $\bar{\chi}_{\text{eff}}^2 = 785.35$ ;  $R - 1 = 0.00514$   
 $\chi_{\text{eff}}^2$ : CMB - plik\_dx11dr2\_HM\_v18\_TT: 762.14

### 17.36 base\_nrun\_plikHM\_TTTEEE\_tau07

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022216	$0.02220^{+0.00033}_{-0.00033}$	$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.17}_{-0.17}$	$Y_P^{\text{BBN}}$	0.246651	$0.24664^{+0.00015}_{-0.00015}$
$\Omega_c h^2$	0.12000	$0.1202^{+0.0029}_{-0.0028}$	$A_{143}^{\text{dustTE}}$	0.156	$0.16^{+0.11}_{-0.11}$	$10^5 \text{D/H}$	2.620	$2.623^{+0.064}_{-0.062}$
$100\theta_{\text{MC}}$	1.04074	$1.04073^{+0.00065}_{-0.00063}$	$A_{143 \times 217}^{\text{dustTE}}$	0.339	$0.34^{+0.16}_{-0.15}$	Age/Gyr	13.819	$13.820^{+0.052}_{-0.052}$
$\tau$	0.0874	$0.084^{+0.031}_{-0.032}$	$A_{217}^{\text{dustTE}}$	1.67	$1.68^{+0.50}_{-0.50}$	$z_*$	1090.11	$1090.15^{+0.61}_{-0.59}$
$\ln(10^{10} A_s)$	3.109	$3.103^{+0.062}_{-0.064}$	$c_{100}$	0.99830	$0.9982^{+0.0015}_{-0.0015}$	$r_*$	144.55	$144.51^{+0.64}_{-0.63}$
$n_s$	0.9651	$0.9631^{+0.0093}_{-0.0094}$	$c_{217}$	0.99569	$0.9959^{+0.0028}_{-0.0028}$	$100\theta_*$	1.04094	$1.04093^{+0.00064}_{-0.00062}$
$dn_s/d \ln k$	0.0086	$0.006^{+0.016}_{-0.016}$	$y_{\text{cal}}$	1.00011	$1.0003^{+0.0049}_{-0.0049}$	$D_A/\text{Gpc}$	13.886	$13.883^{+0.059}_{-0.058}$
$A_{217}^{\text{CIB}}$	61.4	$63^{+10}_{-10}$	$H_0$	67.17	$67.1^{+1.3}_{-1.3}$	$z_{\text{drag}}$	1059.59	$1059.56^{+0.69}_{-0.65}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.63	—	$\Omega_\Lambda$	0.6833	$0.682^{+0.017}_{-0.018}$	$r_{\text{drag}}$	147.26	$147.23^{+0.63}_{-0.63}$
$A_{143}^{\text{tSZ}}$	6.83	$5.5^{+3.6}_{-3.9}$	$\Omega_m$	0.3167	$0.318^{+0.018}_{-0.017}$	$k_D$	0.14057	$0.14059^{+0.00069}_{-0.00068}$
$A_{100}^{\text{PS}}$	248	$259^{+50}_{-50}$	$\Omega_m h^2$	0.14286	$0.1430^{+0.0027}_{-0.0027}$	$100\theta_D$	0.160945	$0.16096^{+0.00039}_{-0.00039}$
$A_{143}^{\text{PS}}$	45.6	$42^{+20}_{-20}$	$\Omega_m h^3$	0.09595	$0.09596^{+0.00062}_{-0.00062}$	$z_{\text{eq}}$	3398	$3403^{+65}_{-64}$
$A_{143 \times 217}^{\text{PS}}$	49.6	$40^{+20}_{-20}$	$\sigma_8$	0.8402	$0.837^{+0.025}_{-0.025}$	$k_{\text{eq}}$	0.010372	$0.01039^{+0.00020}_{-0.00019}$
$A_{217}^{\text{PS}}$	105.2	$98^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4728	$0.472^{+0.020}_{-0.019}$	$100\theta_{\text{eq}}$	0.8134	$0.813^{+0.012}_{-0.012}$
$A^{\text{kSZ}}$	0.00	$< 7.76$	$\sigma_8 \Omega_m^{0.25}$	0.6303	$0.629^{+0.021}_{-0.021}$	$100\theta_{s,\text{eq}}$	0.4495	$0.4492^{+0.0062}_{-0.0062}$
$A_{100}^{\text{dustTT}}$	7.31	$7.3^{+3.7}_{-3.7}$	$\sigma_8/h^{0.5}$	1.0251	$1.022^{+0.032}_{-0.033}$	$r_{\text{drag}}/D_V(0.57)$	0.07129	$0.07124^{+0.00096}_{-0.00096}$
$A_{143}^{\text{dustTT}}$	8.85	$8.9^{+3.6}_{-3.5}$	$\langle d^2 \rangle^{1/2}$	2.548	$2.540^{+0.080}_{-0.081}$	$H(0.57)$	92.81	$92.79^{+0.56}_{-0.55}$
$A_{143 \times 217}^{\text{dustTT}}$	18.1	$16.9^{+8.2}_{-8.1}$	$z_{\text{re}}$	10.84	$10.5^{+2.8}_{-2.9}$	$D_A(0.57)$	1393.6	$1395^{+18}_{-17}$
$A_{217}^{\text{dustTT}}$	82.8	$82^{+10}_{-10}$	$10^9 A_s$	2.240	$2.23^{+0.14}_{-0.14}$	$F_{\text{AP}}(0.57)$	0.67734	$0.6776^{+0.0046}_{-0.0044}$
$A_{100}^{\text{dustEE}}$	0.0802	$0.080^{+0.011}_{-0.011}$	$10^9 A_s e^{-2\tau}$	1.8805	$1.882^{+0.024}_{-0.024}$	$f\sigma_8(0.57)$	0.4898	$0.488^{+0.015}_{-0.016}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0475	$0.0477^{+0.010}_{-0.0099}$	$D_{40}$	1267.7	$1264^{+47}_{-46}$	$\sigma_8(0.57)$	0.6237	$0.621^{+0.019}_{-0.019}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.099^{+0.065}_{-0.063}$	$D_{220}$	5737	$5739^{+77}_{-74}$	$f_{2000}^{143}$	27.2	$29^{+6}_{-6}$
$A_{143}^{\text{dustEE}}$	0.0990	$0.099^{+0.014}_{-0.014}$	$D_{810}$	2533.7	$2533^{+27}_{-27}$	$f_{2000}^{143 \times 217}$	30.77	$32^{+4}_{-4}$
$A_{143 \times 217}^{\text{dustEE}}$	0.222	$0.224^{+0.091}_{-0.091}$	$D_{1420}$	816.1	$814.5^{+9.9}_{-9.9}$	$f_{2000}^{217}$	104.24	$105.3^{+4.1}_{-4.1}$
$A_{217}^{\text{dustEE}}$	0.646	$0.65^{+0.25}_{-0.25}$	$D_{2000}$	231.63	$230.8^{+3.7}_{-3.7}$	$\chi_{\text{plik}}^2$	2430.4	$2450.3 (\nu: 23.2)$
$A_{100}^{\text{dustTE}}$	0.142	$0.141^{+0.074}_{-0.072}$	$n_{s,0.002}$	0.937	$0.944^{+0.051}_{-0.051}$	$\chi_{\text{prior}}^2$	6.8	$20 (\nu: 15.7)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.058}_{-0.057}$	$Y_P$	0.245325	$0.24532^{+0.00015}_{-0.00015}$			

Best-fit  $\chi_{\text{eff}}^2 = 2437.28$ ;  $\bar{\chi}_{\text{eff}}^2 = 2470.34$ ;  $R - 1 = 0.00793$   
 $\chi_{\text{eff}}^2$ : CMB - plik\_dx11dr2\_HM.v18\_TTTEEE: 2430.43

### 17.37 base\_nrun\_CamSpecHM\_TT\_tau07

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02214^{+0.00053}_{-0.00051} (+0.1\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_*$	$144.51^{+0.98}_{-0.99} (+0.1\sigma)$
$\Omega_c h^2$	$0.1204^{+0.0044}_{-0.0042} (-0.2\sigma)$	$H_0$	$67.0^{+1.9}_{-2.0} (+0.2\sigma)$	$100\theta_*$	$1.04103^{+0.00093}_{-0.00096} (+0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04081^{+0.00094}_{-0.00098} (+0.2\sigma)$	$\Omega_\Lambda$	$0.681^{+0.026}_{-0.028} (+0.2\sigma)$	$z_{\text{drag}}$	$1059.4^{+1.1}_{-1.1} (+0.1\sigma)$
$\tau$	$0.082^{+0.036}_{-0.036} (+0.0\sigma)$	$\Omega_m$	$0.319^{+0.028}_{-0.026} (-0.2\sigma)$	$r_{\text{drag}}$	$147.25^{+0.99}_{-1.0} (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.096^{+0.070}_{-0.071} (-0.1\sigma)$	$\Omega_m h^2$	$0.1432^{+0.0042}_{-0.0040} (-0.2\sigma)$	$k_D$	$0.1405^{+0.0011}_{-0.0011} (-0.0\sigma)$
$n_s$	$0.965^{+0.012}_{-0.013} (+0.4\sigma)$	$\Omega_m h^3$	$0.0959^{+0.0010}_{-0.0010} (+0.1\sigma)$	$100\theta_D$	$0.16103^{+0.00064}_{-0.00063} (-0.1\sigma)$
$dn_s/d \ln k$	$0.005^{+0.019}_{-0.019} (-0.1\sigma)$	$\sigma_8$	$0.835^{+0.029}_{-0.028} (-0.1\sigma)$	$z_{\text{eq}}$	$3406^{+99}_{-96} (-0.2\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-50} (-0.4\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.472^{+0.028}_{-0.027} (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.812^{+0.018}_{-0.018} (+0.2\sigma)$
$A_{143}^{\text{PS}}$	$38^{+20}_{-20} (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.628^{+0.027}_{-0.026} (-0.2\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0712^{+0.0015}_{-0.0014} (+0.2\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.020^{+0.040}_{-0.038} (-0.2\sigma)$	$H(0.57)$	$92.75^{+0.86}_{-0.84} (+0.2\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} (-2.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.526^{+0.098}_{-0.093} (-0.3\sigma)$	$D_A(0.57)$	$1396^{+27}_{-26} (-0.2\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.70 (-1.0\sigma)$	$z_{\text{re}}$	$10.3^{+3.2}_{-3.4} (+0.0\sigma)$	$F_{\text{AP}}(0.57)$	$0.6779^{+0.0070}_{-0.0066} (-0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.21}$	$10^9 A_s$	$2.21^{+0.16}_{-0.15} (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.487^{+0.019}_{-0.018} (-0.2\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s e^{-2\tau}$	$1.877^{+0.028}_{-0.028} (-0.4\sigma)$	$\sigma_8(0.57)$	$0.620^{+0.021}_{-0.021} (-0.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{40}$	$1251^{+55}_{-54} (-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24620^{+0.00023}_{-0.00023} (-3.2\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.38}_{-0.37}$	$D_{220}$	$5703^{+79}_{-79} (-0.5\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-6} (-0.4\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2528^{+27}_{-27} (-0.2\sigma)$	$f_{2000}^{217}$	$106.1^{+4.3}_{-4.3} (+0.2\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.22}_{-0.23}$	$D_{1420}$	$814^{+10}_{-10} (-0.0\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+5}_{-5} (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.949^{+0.062}_{-0.063} (+0.2\sigma)$	$\chi_{\text{CamSpec}}^2$	$8059.7 (\nu: 17.2)$
$y_{\text{cal}}$	$1.0001^{+0.0049}_{-0.0048} (-0.0\sigma)$	$Y_{\text{P}}$	$0.24488^{+0.00023}_{-0.00023} (-3.2\sigma)$	$\chi_{\text{prior}}^2$	$9.5 (\nu: 7.4) (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	$\text{Age/Gyr}$	$13.825^{+0.083}_{-0.082} (-0.2\sigma)$		
$c_{217}$	$0.9972^{+0.0035}_{-0.0035} (+0.9\sigma)$	$z_*$	$1090.23^{+0.93}_{-0.90} (-0.2\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 8069.21; \Delta \bar{\chi}_{\text{eff}}^2 = 7283.86; R - 1 = 0.00653$$

## 18 nrun+r

### 18.1 base\_nrun\_r\_plikHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02235	$0.02245^{+0.00058}_{-0.00053}$	$\Omega_m h^2$	0.14270	$0.1422^{+0.0043}_{-0.0042}$	$k_D$	0.14075	$0.1408^{+0.0011}_{-0.0011}$
$\Omega_c h^2$	0.11970	$0.1191^{+0.0045}_{-0.0045}$	$\Omega_m h^3$	0.09624	$0.0963^{+0.0011}_{-0.0011}$	$100\theta_D$	0.16079	$0.16070^{+0.00063}_{-0.00066}$
$100\theta_{MC}$	1.04091	$1.04099^{+0.00096}_{-0.00097}$	$\sigma_8$	0.8359	$0.835^{+0.032}_{-0.032}$	$z_{eq}$	3395	$3384^{+100}_{-100}$
$\tau$	0.0874	$0.090^{+0.046}_{-0.043}$	$\sigma_8 \Omega_m^{0.5}$	0.4682	$0.465^{+0.027}_{-0.027}$	$k_{eq}$	0.010361	$0.01033^{+0.00031}_{-0.00030}$
$\ln(10^{10} A_s)$	3.110	$3.115^{+0.088}_{-0.084}$	$\sigma_8 \Omega_m^{0.25}$	0.6256	$0.623^{+0.027}_{-0.028}$	$100\theta_{eq}$	0.8146	$0.817^{+0.020}_{-0.019}$
$n_s$	0.9653	$0.967^{+0.013}_{-0.013}$	$\sigma_8/h^{0.5}$	1.0179	$1.015^{+0.041}_{-0.041}$	$100\theta_{s,eq}$	0.4501	$0.451^{+0.010}_{-0.0098}$
$dn_s/d \ln k$	-0.0074	$-0.013^{+0.017}_{-0.019}$	$\langle d^2 \rangle^{1/2}$	2.506	$2.492^{+0.094}_{-0.095}$	$r_{drag}/D_V(0.57)$	0.07144	$0.0717^{+0.0016}_{-0.0015}$
$r$	0.000	$< 0.168$	$z_{re}$	10.79	$10.9^{+3.8}_{-3.8}$	$H(0.57)$	92.98	$93.14^{+0.96}_{-0.89}$
$y_{cal}$	1.00010	$1.0004^{+0.0050}_{-0.0049}$	$10^9 A_s$	2.242	$2.26^{+0.20}_{-0.18}$	$D_A(0.57)$	1389.4	$1385^{+27}_{-28}$
$A_{217}^{CIB}$	67.8	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8828	$1.883^{+0.028}_{-0.028}$	$F_{AP}(0.57)$	0.6766	$0.6757^{+0.0071}_{-0.0069}$
$\xi^{tSZ \times CIB}$	0.00	—	$D_{40}$	1222.0	$1231^{+47}_{-44}$	$f\sigma_8(0.57)$	0.4866	$0.485^{+0.020}_{-0.020}$
$A_{143}^{tSZ}$	7.10	$4.9^{+3.8}_{-3.8}$	$D_{220}$	5717	$5717^{+82}_{-80}$	$\sigma_8(0.57)$	0.6213	$0.622^{+0.025}_{-0.024}$
$A_{100}^{PS}$	256	$262^{+60}_{-50}$	$D_{810}$	2535.7	$2538^{+28}_{-27}$	$r_{0.002}$	0.000	$< 0.180$
$A_{143}^{PS}$	40.0	$45^{+20}_{-20}$	$D_{1420}$	813.6	$814^{+11}_{-10}$	$r_{0.01}$	0.000	$< 0.170$
$A_{143 \times 217}^{PS}$	33	$38^{+20}_{-20}$	$D_{2000}$	229.92	$229.7^{+3.9}_{-3.8}$	$\ln(10^{10} A_t)$	-7.93	$-0.1^{+2.0}_{-2.5}$
$A_{217}^{PS}$	97.1	$96^{+20}_{-20}$	$n_{s,0.002}$	0.989	$1.007^{+0.062}_{-0.056}$	$r_{10}$	0.0000	$< 0.0930$
$A^{kSZ}$	0.0	—	$Y_P$	0.245386	$0.24542^{+0.00026}_{-0.00024}$	$10^9 A_t$	0.000	$< 0.382$
$A_{100}^{dustTT}$	7.45	$7.5^{+3.7}_{-3.7}$	$Y_P^{BBN}$	0.246713	$0.24675^{+0.00026}_{-0.00024}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.317$
$A_{143}^{dustTT}$	9.09	$9.1^{+3.6}_{-3.6}$	$10^5 D/H$	2.594	$2.58^{+0.10}_{-0.10}$	$f_{2000}^{143}$	30.3	$31^{+6}_{-6}$
$A_{143 \times 217}^{dustTT}$	17.7	$17.2^{+8.1}_{-8.3}$	Age/Gyr	13.798	$13.784^{+0.086}_{-0.090}$	$f_{2000}^{143 \times 217}$	32.81	$33^{+4}_{-4}$
$A_{217}^{dustTT}$	81.8	$82^{+10}_{-10}$	$z_*$	1089.91	$1089.76^{+0.94}_{-0.97}$	$f_{2000}^{217}$	106.31	$106.7^{+4.2}_{-4.1}$
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.52	$144.60^{+0.99}_{-1.0}$	$\chi_{lowTEB}^2$	10495.1	$10497.0 (\nu: 4.6)$
$c_{217}$	0.99599	$0.9960^{+0.0029}_{-0.0028}$	$100\theta_*$	1.04110	$1.04117^{+0.00093}_{-0.00094}$	$\chi_{plik}^2$	764.1	$779.4 (\nu: 18.4)$
$H_0$	67.44	$67.8^{+2.1}_{-2.0}$	$D_A/Gpc$	13.882	$13.888^{+0.091}_{-0.093}$	$\chi_{prior}^2$	2.0	$7.4 (\nu: 6.5)$
$\Omega_\Lambda$	0.6863	$0.690^{+0.027}_{-0.029}$	$z_{drag}$	1059.89	$1060.0^{+1.2}_{-1.1}$	$\chi_{CMB}^2$	11259.1	$11276.4 (\nu: 17.8)$
$\Omega_m$	0.3137	$0.310^{+0.029}_{-0.027}$	$r_{drag}$	147.19	$147.24^{+0.99}_{-1.0}$			

Best-fit  $\chi_{eff}^2 = 11261.12$ ;  $\bar{\chi}_{eff}^2 = 11283.76$ ;  $R - 1 = 0.00694$

$\chi_{eff}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.06 plik\_dx11dr2\_HM\_v18\_TT: 764.07



## 18.2 base\_nrun\_r\_plikHM\_TT\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022405	$0.02246^{+0.00049}_{-0.00047}$	$\sigma_8$	0.8361	$0.835^{+0.033}_{-0.031}$	$100\theta_{\text{eq}}$	0.8172	$0.818^{+0.011}_{-0.011}$
$\Omega_c h^2$	0.11910	$0.1189^{+0.0026}_{-0.0026}$	$\sigma_8 \Omega_m^{0.5}$	0.4654	$0.464^{+0.021}_{-0.021}$	$100\theta_{\text{s,eq}}$	0.4514	$0.4518^{+0.0057}_{-0.0056}$
$100\theta_{\text{MC}}$	1.04104	$1.04103^{+0.00082}_{-0.00084}$	$\sigma_8 \Omega_m^{0.25}$	0.6238	$0.622^{+0.025}_{-0.025}$	$r_{\text{drag}}/D_V(0.57)$	0.07166	$0.07173^{+0.00088}_{-0.00085}$
$\tau$	0.0899	$0.091^{+0.041}_{-0.040}$	$\sigma_8/h^{0.5}$	1.0158	$1.014^{+0.040}_{-0.038}$	$H(0.57)$	93.11	$93.18^{+0.62}_{-0.58}$
$\ln(10^{10} A_s)$	3.114	$3.116^{+0.083}_{-0.080}$	$\langle d^2 \rangle^{1/2}$	2.501	$2.489^{+0.089}_{-0.088}$	$D_A(0.57)$	1385.5	$1384^{+16}_{-16}$
$n_s$	0.9672	$0.9673^{+0.0091}_{-0.0091}$	$z_{\text{re}}$	10.98	$10.9^{+3.6}_{-3.5}$	$F_{\text{AP}}(0.57)$	0.67560	$0.6753^{+0.0039}_{-0.0039}$
$dn_s/d \ln k$	-0.0070	$-0.012^{+0.017}_{-0.018}$	$10^9 A_s$	2.251	$2.26^{+0.19}_{-0.18}$	$f\sigma_8(0.57)$	0.4857	$0.485^{+0.019}_{-0.019}$
$r$	0.000	$< 0.166$	$10^9 A_s e^{-2\tau}$	1.8808	$1.882^{+0.024}_{-0.024}$	$\sigma_8(0.57)$	0.6224	$0.622^{+0.025}_{-0.024}$
$y_{\text{cal}}$	1.00034	$1.0005^{+0.0049}_{-0.0049}$	$D_{40}$	1220.4	$1230^{+46}_{-42}$	$r_{0.002}$	0.000	$< 0.176$
$A_{217}^{\text{CIB}}$	67.5	$65^{+10}_{-10}$	$D_{220}$	5721	$5719^{+81}_{-78}$	$r_{0.01}$	0.000	$< 0.166$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{810}$	2536.3	$2538^{+28}_{-27}$	$\ln(10^{10} A_t)$	-6.83	$-0.1^{+2.0}_{-2.5}$
$A_{143}^{\text{tSZ}}$	7.10	$4.8^{+3.8}_{-3.8}$	$D_{1420}$	814.5	$814^{+10}_{-10}$	$r_{10}$	0.0000	$< 0.0911$
$A_{100}^{\text{PS}}$	255	$262^{+60}_{-50}$	$D_{2000}$	230.35	$229.8^{+3.7}_{-3.7}$	$10^9 A_t$	0.000	$< 0.372$
$A_{143}^{\text{PS}}$	39.6	$45^{+20}_{-20}$	$n_{\text{s},0.002}$	0.990	$1.007^{+0.058}_{-0.055}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.312$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$Y_{\text{P}}$	0.245408	$0.24543^{+0.00022}_{-0.00022}$	$f_{2000}^{143}$	30.0	$31^{+6}_{-6}$
$A_{217}^{\text{PS}}$	96.9	$96^{+20}_{-20}$	$Y_{\text{P}}^{\text{BBN}}$	0.246735	$0.24676^{+0.00022}_{-0.00022}$	$f_{2000}^{143 \times 217}$	32.53	$33^{+4}_{-4}$
$A^{\text{kSZ}}$	0.0	—	$10^5 \text{D}/\text{H}$	2.585	$2.575^{+0.089}_{-0.090}$	$f_{2000}^{217}$	106.08	$106.7^{+4.1}_{-4.1}$
$A_{100}^{\text{dustTT}}$	7.45	$7.5^{+3.7}_{-3.7}$	Age/Gyr	13.787	$13.781^{+0.064}_{-0.066}$	$\chi_{\text{lowTEB}}^2$	10495.1	10496.8 ( $\nu$ : 4.5)
$A_{143}^{\text{dustTT}}$	8.99	$9.1^{+3.6}_{-3.5}$	$z_*$	1089.80	$1089.72^{+0.69}_{-0.70}$	$\chi_{\text{plik}}^2$	764.0	778.9 ( $\nu$ : 25.8)
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.2^{+8.0}_{-8.2}$	$r_*$	144.64	$144.65^{+0.67}_{-0.67}$	$\chi_{6\text{DF}}^2$	0.022	0.055 ( $\nu$ : 0.0)
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$100\theta_*$	1.04121	$1.04120^{+0.00081}_{-0.00083}$	$\chi_{\text{MGS}}^2$	1.28	1.45 ( $\nu$ : 0.2)
$c_{100}$	0.99792	$0.9979^{+0.0016}_{-0.0015}$	$D_A/\text{Gpc}$	13.891	$13.893^{+0.065}_{-0.065}$	$\chi_{\text{DR11CMass}}^2$	2.46	2.90 ( $\nu$ : 0.2)
$c_{217}$	0.99600	$0.9960^{+0.0028}_{-0.0029}$	$z_{\text{drag}}$	1059.97	$1060.1^{+1.1}_{-1.0}$	$\chi_{\text{DR11LOWZ}}^2$	0.61	0.66 ( $\nu$ : 0.2)
$H_0$	67.74	$67.9^{+1.2}_{-1.1}$	$r_{\text{drag}}$	147.29	$147.29^{+0.75}_{-0.75}$	$\chi_{\text{prior}}^2$	2.0	7.4 ( $\nu$ : 6.5)
$\Omega_\Lambda$	0.6902	$0.691^{+0.015}_{-0.016}$	$k_{\text{D}}$	0.14068	$0.1407^{+0.0010}_{-0.0010}$	$\chi_{\text{CMB}}^2$	11259.2	11275.8 ( $\nu$ : 25.5)
$\Omega_{\text{m}}$	0.3098	$0.309^{+0.016}_{-0.015}$	$100\theta_{\text{D}}$	0.16076	$0.16069^{+0.00061}_{-0.00062}$	$\chi_{\text{BAO}}^2$	4.37	5.1 ( $\nu$ : 0.5)
$\Omega_{\text{m}} h^2$	0.14215	$0.1420^{+0.0025}_{-0.0025}$	$z_{\text{eq}}$	3381	$3378^{+60}_{-59}$			
$\Omega_{\text{m}} h^3$	0.09629	$0.0963^{+0.0011}_{-0.0010}$	$k_{\text{eq}}$	0.010321	$0.01031^{+0.00018}_{-0.00018}$			

Best-fit  $\chi_{\text{eff}}^2 = 11265.57$ ;  $\bar{\chi}_{\text{eff}}^2 = 11288.20$ ;  $R - 1 = 0.00475$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.02 MGS: 1.28 DR11CMass: 2.46 DR11LOWZ: 0.61 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.15 plik\_dx11dr2\_HM\_v18.TT: 764.02

### 18.3 base\_nrun\_r\_plikHM\_TT\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02240	$0.02247^{+0.00056}_{-0.00052}$	$\Omega_m h^2$	0.14236	$0.1419^{+0.0039}_{-0.0038}$	$k_D$	0.14074	$0.1407^{+0.0011}_{-0.0011}$
$\Omega_c h^2$	0.11931	$0.1188^{+0.0041}_{-0.0041}$	$\Omega_m h^3$	0.09628	$0.0964^{+0.0011}_{-0.0011}$	$100\theta_D$	0.16074	$0.16068^{+0.00063}_{-0.00064}$
$100\theta_{MC}$	1.04095	$1.04104^{+0.00094}_{-0.00095}$	$\sigma_8$	0.8361	$0.835^{+0.033}_{-0.031}$	$z_{eq}$	3386	$3377^{+93}_{-92}$
$\tau$	0.0894	$0.091^{+0.045}_{-0.043}$	$\sigma_8 \Omega_m^{0.5}$	0.4664	$0.464^{+0.026}_{-0.025}$	$k_{eq}$	0.010336	$0.01031^{+0.00028}_{-0.00028}$
$\ln(10^{10} A_s)$	3.114	$3.118^{+0.088}_{-0.084}$	$\sigma_8 \Omega_m^{0.25}$	0.6245	$0.622^{+0.027}_{-0.027}$	$100\theta_{eq}$	0.8162	$0.818^{+0.018}_{-0.017}$
$n_s$	0.9661	$0.968^{+0.012}_{-0.012}$	$\sigma_8/h^{0.5}$	1.0166	$1.014^{+0.041}_{-0.041}$	$100\theta_{s,eq}$	0.4509	$0.4520^{+0.0092}_{-0.0089}$
$dn_s/d \ln k$	-0.0079	$-0.013^{+0.017}_{-0.018}$	$\langle d^2 \rangle^{1/2}$	2.503	$2.489^{+0.092}_{-0.092}$	$r_{drag}/D_V(0.57)$	0.07158	$0.0718^{+0.0014}_{-0.0014}$
$r$	0.000	$< 0.168$	$z_{re}$	10.94	$11.0^{+3.7}_{-3.7}$	$H(0.57)$	93.07	$93.20^{+0.91}_{-0.83}$
$y_{cal}$	1.00039	$1.0005^{+0.0049}_{-0.0049}$	$10^9 A_s$	2.251	$2.26^{+0.20}_{-0.18}$	$D_A(0.57)$	1386.8	$1383^{+25}_{-26}$
$A_{217}^{CIB}$	67.9	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8823	$1.882^{+0.028}_{-0.027}$	$F_{AP}(0.57)$	0.6760	$0.6752^{+0.0065}_{-0.0064}$
$\xi^{tSZ \times CIB}$	0.00	—	$D_{40}$	1220.4	$1229^{+47}_{-43}$	$f\sigma_8(0.57)$	0.4860	$0.485^{+0.020}_{-0.020}$
$A_{143}^{tSZ}$	7.20	$4.9^{+3.8}_{-3.8}$	$D_{220}$	5724	$5719^{+81}_{-78}$	$\sigma_8(0.57)$	0.6220	$0.622^{+0.026}_{-0.024}$
$A_{100}^{PS}$	255	$262^{+60}_{-50}$	$D_{810}$	2536.8	$2537^{+28}_{-28}$	$r_{0.002}$	0.000	$< 0.179$
$A_{143}^{PS}$	39.9	$45^{+20}_{-20}$	$D_{1420}$	814.1	$814^{+10}_{-10}$	$r_{0.01}$	0.000	$< 0.169$
$A_{143 \times 217}^{PS}$	33	$38^{+20}_{-20}$	$D_{2000}$	230.13	$229.8^{+3.9}_{-3.8}$	$\ln(10^{10} A_t)$	-7.08	$-0.1^{+2.0}_{-2.5}$
$A_{217}^{PS}$	97.0	$96^{+20}_{-20}$	$n_{s,0.002}$	0.992	$1.008^{+0.061}_{-0.056}$	$r_{10}$	0.0000	$< 0.0929$
$A^{kSZ}$	0.0	—	$Y_P$	0.245407	$0.24544^{+0.00025}_{-0.00024}$	$10^9 A_t$	0.000	$< 0.380$
$A_{100}^{dustTT}$	7.40	$7.5^{+3.7}_{-3.7}$	$Y_P^{BBN}$	0.246734	$0.24676^{+0.00025}_{-0.00024}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.315$
$A_{143}^{dustTT}$	9.14	$9.1^{+3.6}_{-3.6}$	$10^5 D/H$	2.585	$2.573^{+0.098}_{-0.10}$	$f_{2000}^{143}$	30.3	$31^{+6}_{-6}$
$A_{143 \times 217}^{dustTT}$	17.9	$17.2^{+8.0}_{-8.3}$	Age/Gyr	13.790	$13.779^{+0.081}_{-0.085}$	$f_{2000}^{143 \times 217}$	32.80	$33^{+4}_{-4}$
$A_{217}^{dustTT}$	81.9	$82^{+10}_{-10}$	$z_*$	1089.82	$1089.69^{+0.89}_{-0.91}$	$f_{2000}^{217}$	106.36	$106.7^{+4.2}_{-4.2}$
$c_{100}$	0.99794	$0.9979^{+0.0016}_{-0.0015}$	$r_*$	144.58	$144.66^{+0.92}_{-0.93}$	$\chi_{lowTEB}^2$	10495.0	$10497.0 (\nu: 4.7)$
$c_{217}$	0.99597	$0.9960^{+0.0028}_{-0.0029}$	$100\theta_*$	1.04113	$1.04121^{+0.00091}_{-0.00092}$	$\chi_{plik}^2$	764.1	$779.4 (\nu: 30.5)$
$H_0$	67.63	$67.9^{+1.9}_{-1.9}$	$D_A/\text{Gpc}$	13.887	$13.894^{+0.086}_{-0.087}$	$\chi_{JLA}^2$	706.74	$706.80 (\nu: 0.1)$
$\Omega_\Lambda$	0.6888	$0.692^{+0.025}_{-0.026}$	$z_{drag}$	1059.97	$1060.1^{+1.1}_{-1.1}$	$\chi_{prior}^2$	2.0	$7.4 (\nu: 6.5)$
$\Omega_m$	0.3112	$0.308^{+0.026}_{-0.025}$	$r_{drag}$	147.24	$147.29^{+0.94}_{-0.95}$	$\chi_{CMB}^2$	11259.1	$11276.4 (\nu: 30.4)$

Best-fit  $\chi_{eff}^2 = 11967.89$ ;  $\bar{\chi}_{eff}^2 = 11990.57$ ;  $R - 1 = 0.00459$

$\chi_{eff}^2$ : CMB - lowl.SMW\_70\_dx11d.2014.10.03.v5c\_Ap: 10494.99 plik\_dx11dr2\_HM\_v18\_TT: 764.14 SN - JLA December\_2013: 706.74

#### 18.4 base\_nrun\_r\_plikHM\_TT\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02242	$0.02250^{+0.00057}_{-0.00053}$	$\Omega_m h^2$	0.14207	$0.1417^{+0.0041}_{-0.0040}$	$k_D$	0.14068	$0.1407^{+0.0011}_{-0.0011}$
$\Omega_c h^2$	0.11901	$0.1186^{+0.0043}_{-0.0042}$	$\Omega_m h^3$	0.09628	$0.0964^{+0.0011}_{-0.0011}$	$100\theta_D$	0.16074	$0.16066^{+0.00063}_{-0.00065}$
$100\theta_{MC}$	1.04102	$1.04107^{+0.00095}_{-0.00095}$	$\sigma_8$	0.8366	$0.835^{+0.032}_{-0.032}$	$z_{eq}$	3380	$3372^{+98}_{-96}$
$\tau$	0.0912	$0.093^{+0.045}_{-0.043}$	$\sigma_8 \Omega_m^{0.5}$	0.4653	$0.463^{+0.027}_{-0.026}$	$k_{eq}$	0.010315	$0.01029^{+0.00030}_{-0.00029}$
$\ln(10^{10} A_s)$	3.117	$3.120^{+0.088}_{-0.085}$	$\sigma_8 \Omega_m^{0.25}$	0.6239	$0.622^{+0.027}_{-0.028}$	$100\theta_{eq}$	0.8175	$0.819^{+0.019}_{-0.018}$
$n_s$	0.9673	$0.968^{+0.013}_{-0.013}$	$\sigma_8/h^{0.5}$	1.0163	$1.013^{+0.041}_{-0.042}$	$100\theta_{s,eq}$	0.4516	$0.4524^{+0.0095}_{-0.0094}$
$dn_s/d \ln k$	-0.0080	$-0.013^{+0.017}_{-0.019}$	$\langle d^2 \rangle^{1/2}$	2.501	$2.488^{+0.092}_{-0.094}$	$r_{drag}/D_V(0.57)$	0.07168	$0.0718^{+0.0015}_{-0.0015}$
$r$	0.000	$< 0.173$	$z_{re}$	11.09	$11.1^{+3.8}_{-3.7}$	$H(0.57)$	93.13	$93.25^{+0.94}_{-0.87}$
$y_{cal}$	1.00030	$1.0004^{+0.0049}_{-0.0049}$	$10^9 A_s$	2.257	$2.27^{+0.21}_{-0.19}$	$D_A(0.57)$	1385.0	$1382^{+27}_{-27}$
$A_{217}^{CIB}$	67.3	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8807	$1.881^{+0.028}_{-0.027}$	$F_{AP}(0.57)$	0.6755	$0.6748^{+0.0068}_{-0.0066}$
$\xi^{tSZ \times CIB}$	0.00	—	$D_{40}$	1217.9	$1228^{+47}_{-44}$	$f\sigma_8(0.57)$	0.4859	$0.484^{+0.020}_{-0.020}$
$A_{143}^{tSZ}$	7.23	$4.9^{+3.8}_{-3.8}$	$D_{220}$	5720	$5720^{+82}_{-79}$	$\sigma_8(0.57)$	0.6229	$0.623^{+0.025}_{-0.025}$
$A_{100}^{PS}$	253	$262^{+50}_{-50}$	$D_{810}$	2536.3	$2537^{+28}_{-27}$	$r_{0.002}$	0.000	$< 0.187$
$A_{143}^{PS}$	39.1	$45^{+20}_{-20}$	$D_{1420}$	814.3	$814^{+11}_{-10}$	$r_{0.01}$	0.000	$< 0.175$
$A_{143 \times 217}^{PS}$	33	$38^{+20}_{-20}$	$D_{2000}$	230.27	$229.9^{+3.9}_{-3.8}$	$\ln(10^{10} A_t)$	-8.36	$-0.1^{+2.0}_{-2.5}$
$A_{217}^{PS}$	97.4	$96^{+20}_{-20}$	$n_{s,0.002}$	0.993	$1.010^{+0.061}_{-0.057}$	$r_{10}$	0.0000	$< 0.0966$
$A^{kSZ}$	0.0	—	$Y_P$	0.245413	$0.24545^{+0.00025}_{-0.00024}$	$10^9 A_t$	0.000	$< 0.393$
$A_{100}^{dustTT}$	7.44	$7.5^{+3.7}_{-3.7}$	$Y_P^{BBN}$	0.246740	$0.24677^{+0.00025}_{-0.00024}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.325$
$A_{143}^{dustTT}$	9.08	$9.1^{+3.6}_{-3.6}$	$10^5 D/H$	2.583	$2.57^{+0.10}_{-0.10}$	$f_{2000}^{143}$	30.0	$31^{+6}_{-6}$
$A_{143 \times 217}^{dustTT}$	17.6	$17.2^{+8.0}_{-8.3}$	Age/Gyr	13.786	$13.774^{+0.083}_{-0.087}$	$f_{2000}^{143 \times 217}$	32.51	$33^{+4}_{-4}$
$A_{217}^{dustTT}$	81.7	$82^{+10}_{-10}$	$z_*$	1089.78	$1089.64^{+0.92}_{-0.94}$	$f_{2000}^{217}$	106.10	$106.6^{+4.2}_{-4.2}$
$c_{100}$	0.99791	$0.9979^{+0.0016}_{-0.0015}$	$r_*$	144.65	$144.70^{+0.95}_{-0.97}$	$\chi_{lowTEB}^2$	10495.0	$10497.0 (\nu: 4.8)$
$c_{217}$	0.99589	$0.9960^{+0.0028}_{-0.0028}$	$100\theta_*$	1.04120	$1.04124^{+0.00092}_{-0.00093}$	$\chi_{plik}^2$	764.1	$779.4 (\nu: 21.6)$
$H_0$	67.77	$68.0^{+2.0}_{-2.0}$	$D_A/Gpc$	13.893	$13.897^{+0.088}_{-0.090}$	$\chi_{H070p6}^2$	0.72	$0.70 (\nu: 0.1)$
$\Omega_\Lambda$	0.6907	$0.693^{+0.025}_{-0.027}$	$z_{drag}$	1059.97	$1060.1^{+1.2}_{-1.1}$	$\chi_{prior}^2$	2.1	$7.4 (\nu: 6.5)$
$\Omega_m$	0.3093	$0.307^{+0.027}_{-0.025}$	$r_{drag}$	147.30	$147.32^{+0.96}_{-0.98}$	$\chi_{CMB}^2$	11259.1	$11276.5 (\nu: 21.0)$

Best-fit  $\chi_{eff}^2 = 11261.93$ ;  $\bar{\chi}_{eff}^2 = 11284.60$ ;  $R - 1 = 0.00746$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10494.99 plik\_dx11dr2\_HM\_v18\_TT: 764.13 Hubble - H070p6: 0.72

## 18.5 base\_nrun\_r\_plikHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00057}_{-0.00052}$	$\Omega_m h^2$	$0.1423^{+0.0042}_{-0.0041}$	$k_D$	$0.1408^{+0.0011}_{-0.0011}$
$\Omega_c h^2$	$0.1192^{+0.0044}_{-0.0044}$	$\Omega_m h^3$	$0.0964^{+0.0011}_{-0.0010}$	$100\theta_D$	$0.16070^{+0.00062}_{-0.00064}$
$100\theta_{MC}$	$1.04099^{+0.00096}_{-0.00096}$	$\sigma_8$	$0.836^{+0.032}_{-0.031}$	$z_{eq}$	$3384^{+100}_{-98}$
$\tau$	$0.091^{+0.043}_{-0.042}$	$\sigma_8 \Omega_m^{0.5}$	$0.465^{+0.027}_{-0.026}$	$k_{eq}$	$0.01033^{+0.00031}_{-0.00030}$
$\ln(10^{10} A_s)$	$3.116^{+0.084}_{-0.083}$	$\sigma_8 \Omega_m^{0.25}$	$0.624^{+0.027}_{-0.027}$	$100\theta_{eq}$	$0.817^{+0.019}_{-0.019}$
$n_s$	$0.967^{+0.013}_{-0.013}$	$\sigma_8/h^{0.5}$	$1.015^{+0.041}_{-0.040}$	$100\theta_{s,eq}$	$0.4512^{+0.0098}_{-0.0096}$
$dn_s/d \ln k$	$-0.013^{+0.017}_{-0.018}$	$\langle d^2 \rangle^{1/2}$	$2.493^{+0.093}_{-0.091}$	$r_{drag}/D_V(0.57)$	$0.0716^{+0.0016}_{-0.0015}$
$r$	$< 0.166$	$z_{re}$	$10.9^{+3.5}_{-3.5}$	$H(0.57)$	$93.14^{+0.95}_{-0.86}$
$y_{cal}$	$1.0004^{+0.0049}_{-0.0049}$	$10^9 A_s$	$2.26^{+0.19}_{-0.19}$	$D_A(0.57)$	$1385^{+27}_{-27}$
$A_{217}^{CIB}$	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	$1.883^{+0.028}_{-0.028}$	$F_{AP}(0.57)$	$0.6757^{+0.0070}_{-0.0069}$
$\xi^{tSZ \times CIB}$	—	$D_{40}$	$1231^{+47}_{-44}$	$f\sigma_8(0.57)$	$0.485^{+0.020}_{-0.019}$
$A_{143}^{tSZ}$	$4.9^{+3.8}_{-3.8}$	$D_{220}$	$5718^{+82}_{-79}$	$\sigma_8(0.57)$	$0.622^{+0.025}_{-0.024}$
$A_{100}^{PS}$	$262^{+60}_{-50}$	$D_{810}$	$2538^{+28}_{-28}$	$r_{0.002}$	$< 0.177$
$A_{143}^{PS}$	$45^{+20}_{-20}$	$D_{1420}$	$814^{+10}_{-10}$	$r_{0.01}$	$< 0.167$
$A_{143 \times 217}^{PS}$	$38^{+20}_{-20}$	$D_{2000}$	$229.8^{+3.9}_{-3.8}$	$\ln(10^{10} A_t)$	$-0.1^{+2.0}_{-2.5}$
$A_{217}^{PS}$	$96^{+20}_{-20}$	$n_{s,0.002}$	$1.007^{+0.061}_{-0.056}$	$r_{10}$	$< 0.0914$
$A^{kSZ}$	—	$Y_P$	$0.24543^{+0.00025}_{-0.00024}$	$10^9 A_t$	$< 0.375$
$A_{100}^{dustTT}$	$7.5^{+3.7}_{-3.7}$	$Y_P^{BBN}$	$0.24675^{+0.00025}_{-0.00024}$	$10^9 A_t e^{-2\tau}$	$< 0.312$
$A_{143}^{dustTT}$	$9.1^{+3.6}_{-3.6}$	$10^5 D/H$	$2.578^{+0.099}_{-0.10}$	$f_{2000}^{143}$	$31^{+6}_{-6}$
$A_{143 \times 217}^{dustTT}$	$17.2^{+8.0}_{-8.3}$	$Age/Gyr$	$13.784^{+0.083}_{-0.089}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A_{217}^{dustTT}$	$82^{+10}_{-10}$	$z_*$	$1089.76^{+0.92}_{-0.96}$	$f_{2000}^{217}$	$106.7^{+4.2}_{-4.2}$
$c_{100}$	$0.9979^{+0.0016}_{-0.0015}$	$r_*$	$144.59^{+0.97}_{-0.99}$	$\chi_{lowTEB}^2$	$10497.0 (\nu: 4.7)$
$c_{217}$	$0.9960^{+0.0028}_{-0.0029}$	$100\theta_*$	$1.04117^{+0.00094}_{-0.00094}$	$\chi_{plik}^2$	$779.4 (\nu: 30.7)$
$H_0$	$67.7^{+2.1}_{-2.0}$	$D_A/Gpc$	$13.887^{+0.091}_{-0.092}$	$\chi_{prior}^2$	$7.4 (\nu: 6.5)$
$\Omega_\Lambda$	$0.690^{+0.027}_{-0.028}$	$z_{drag}$	$1060.1^{+1.2}_{-1.1}$	$\chi_{CMB}^2$	$11276.4 (\nu: 30.7)$
$\Omega_m$	$0.310^{+0.028}_{-0.027}$	$r_{drag}$	$147.23^{+0.98}_{-1.0}$		

$$\bar{\chi}_{eff}^2 = 11283.76; R - 1 = 0.00414$$

## 18.6 base\_nrun\_r\_plikHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022336	$0.02232^{+0.00033}_{-0.00032}$	$A_{143}^{\text{dust}TE}$	0.158	$0.16^{+0.11}_{-0.10}$	$100\theta_*$	1.04098	$1.04099^{+0.00063}_{-0.00060}$
$\Omega_c h^2$	0.11968	$0.1197^{+0.0029}_{-0.0029}$	$A_{143 \times 217}^{\text{dust}TE}$	0.340	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.885	$13.887^{+0.059}_{-0.059}$
$100\theta_{\text{MC}}$	1.04080	$1.04080^{+0.00064}_{-0.00061}$	$A_{217}^{\text{dust}TE}$	1.70	$1.66^{+0.50}_{-0.50}$	$z_{\text{drag}}$	1059.82	$1059.79^{+0.69}_{-0.65}$
$\tau$	0.0860	$0.084^{+0.035}_{-0.035}$	$c_{100}$	0.99814	$0.9982^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.22	$147.24^{+0.63}_{-0.63}$
$\ln(10^{10} A_s)$	3.108	$3.104^{+0.068}_{-0.069}$	$c_{217}$	0.99594	$0.9961^{+0.0028}_{-0.0029}$	$k_D$	0.14071	$0.14067^{+0.00068}_{-0.00069}$
$n_s$	0.9645	$0.9644^{+0.0096}_{-0.0095}$	$H_0$	67.40	$67.4^{+1.3}_{-1.3}$	$100\theta_D$	0.160795	$0.16082^{+0.00039}_{-0.00038}$
$dn_s/d \ln k$	-0.0055	$-0.008^{+0.015}_{-0.015}$	$\Omega_\Lambda$	0.6859	$0.686^{+0.017}_{-0.018}$	$z_{\text{eq}}$	3394	$3393^{+66}_{-64}$
$r$	0.001	$< 0.149$	$\Omega_m$	0.3141	$0.314^{+0.018}_{-0.017}$	$k_{\text{eq}}$	0.010358	$0.01036^{+0.00020}_{-0.00019}$
$y_{\text{cal}}$	1.00034	$1.0004^{+0.0049}_{-0.0050}$	$\Omega_m h^2$	0.14266	$0.1426^{+0.0027}_{-0.0027}$	$100\theta_{\text{eq}}$	0.8146	$0.815^{+0.012}_{-0.012}$
$A_{217}^{\text{CIB}}$	67.0	$65^{+10}_{-10}$	$\Omega_m h^3$	0.09615	$0.09611^{+0.00062}_{-0.00060}$	$100\theta_{s,\text{eq}}$	0.4501	$0.4502^{+0.0063}_{-0.0063}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.13	—	$\sigma_8$	0.8351	$0.833^{+0.026}_{-0.026}$	$r_{\text{drag}}/D_V(0.57)$	0.07142	$0.07143^{+0.00098}_{-0.00097}$
$A_{143}^{\text{tSZ}}$	7.05	$5.0^{+3.8}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	0.4680	$0.467^{+0.020}_{-0.019}$	$H(0.57)$	92.94	$92.94^{+0.57}_{-0.54}$
$A_{100}^{\text{PS}}$	257	$265^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6252	$0.623^{+0.022}_{-0.022}$	$D_A(0.57)$	1390.2	$1390^{+17}_{-17}$
$A_{143}^{\text{PS}}$	41.6	$45^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0173	$1.014^{+0.033}_{-0.033}$	$F_{\text{AP}}(0.57)$	0.67669	$0.6767^{+0.0046}_{-0.0044}$
$A_{143 \times 217}^{\text{PS}}$	36.5	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.510	$2.498^{+0.077}_{-0.079}$	$f\sigma_8(0.57)$	0.4862	$0.485^{+0.016}_{-0.016}$
$A_{217}^{\text{PS}}$	98.1	$97^{+20}_{-20}$	$z_{\text{re}}$	10.67	$10.4^{+3.1}_{-3.2}$	$\sigma_8(0.57)$	0.6206	$0.619^{+0.020}_{-0.020}$
$A^{\text{kSZ}}$	0.1	—	$10^9 A_s$	2.238	$2.23^{+0.16}_{-0.15}$	$r_{0.002}$	0.001	$< 0.152$
$A_{100}^{\text{dust}TT}$	7.10	$7.4^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8845	$1.885^{+0.025}_{-0.024}$	$r_{0.01}$	0.001	$< 0.148$
$A_{143}^{\text{dust}TT}$	8.82	$8.9^{+3.6}_{-3.6}$	$D_{40}$	1230.2	$1242^{+42}_{-40}$	$\ln(10^{10} A_t)$	-3.92	$-0.2^{+2.0}_{-2.4}$
$A_{143 \times 217}^{\text{dust}TT}$	17.3	$17.0^{+8.1}_{-8.2}$	$D_{220}$	5731	$5724^{+78}_{-77}$	$r_{10}$	0.0004	$< 0.0784$
$A_{217}^{\text{dust}TT}$	81.0	$81^{+10}_{-10}$	$D_{810}$	2537.7	$2538^{+27}_{-27}$	$10^9 A_t$	0.002	$< 0.333$
$A_{100}^{\text{dust}EE}$	0.0823	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	814.3	$813.4^{+9.8}_{-9.6}$	$10^9 A_t e^{-2\tau}$	0.002	$< 0.281$
$A_{100 \times 143}^{\text{dust}EE}$	0.0493	$0.0488^{+0.0099}_{-0.0099}$	$D_{2000}$	230.14	$229.6^{+3.5}_{-3.6}$	$f_{2000}^{143}$	29.9	$31^{+6}_{-6}$
$A_{100 \times 217}^{\text{dust}EE}$	0.109	$0.0995^{+0.065}_{-0.063}$	$n_{s,0.002}$	0.9822	$0.992^{+0.050}_{-0.046}$	$f_{2000}^{143 \times 217}$	32.46	$33^{+4}_{-4}$
$A_{143}^{\text{dust}EE}$	0.1011	$0.100^{+0.014}_{-0.014}$	$Y_P$	0.245378	$0.24537^{+0.00015}_{-0.00015}$	$f_{2000}^{217}$	105.91	$106.7^{+4.0}_{-4.0}$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.223^{+0.091}_{-0.091}$	$Y_P^{\text{BBN}}$	0.246704	$0.24670^{+0.00015}_{-0.00015}$	$\chi_{\text{lowTEB}}^2$	10495.8	$10497.5 (\nu: 4.3)$
$A_{217}^{\text{dust}EE}$	0.641	$0.65^{+0.25}_{-0.26}$	$10^5 D/H$	2.598	$2.601^{+0.062}_{-0.062}$	$\chi_{\text{plik}}^2$	2432.6	$2452.7 (\nu: 25.0)$
$A_{100}^{\text{dust}TE}$	0.139	$0.142^{+0.074}_{-0.074}$	Age/Gyr	13.803	$13.805^{+0.051}_{-0.053}$	$\chi_{\text{prior}}^2$	6.8	$19.3 (\nu: 15.0)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.058}_{-0.057}$	$z_*$	1089.94	$1089.96^{+0.60}_{-0.59}$	$\chi_{\text{CMB}}^2$	12928.4	$12950.2 (\nu: 24.3)$
$A_{100 \times 217}^{\text{dust}TE}$	0.294	$0.30^{+0.17}_{-0.17}$	$r_*$	144.54	$144.56^{+0.63}_{-0.64}$			

Best-fit  $\chi_{\text{eff}}^2 = 12935.18$ ;  $\bar{\chi}_{\text{eff}}^2 = 12969.51$ ;  $R - 1 = 0.01111$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.80 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2432.59



## 18.7 base\_nrun\_r\_plikHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022334	$0.02235^{+0.00030}_{-0.00029}$	$A_{217}^{\text{dust}TE}$	1.658	$1.65^{+0.50}_{-0.49}$	$k_D$	0.14059	$0.14060^{+0.00062}_{-0.00063}$
$\Omega_c h^2$	0.11925	$0.1192^{+0.0021}_{-0.0021}$	$c_{100}$	0.99822	$0.9982^{+0.0016}_{-0.0015}$	$100\theta_D$	0.160820	$0.16080^{+0.00037}_{-0.00037}$
$100\theta_{MC}$	1.04085	$1.04086^{+0.00060}_{-0.00058}$	$c_{217}$	0.99599	$0.9961^{+0.0028}_{-0.0029}$	$z_{eq}$	3383.5	$3382^{+48}_{-48}$
$\tau$	0.0873	$0.086^{+0.033}_{-0.034}$	$H_0$	67.56	$67.62^{+0.94}_{-0.94}$	$k_{eq}$	0.010327	$0.01032^{+0.00015}_{-0.00015}$
$\ln(10^{10} A_s)$	3.109	$3.108^{+0.067}_{-0.068}$	$\Omega_\Lambda$	0.6884	$0.689^{+0.012}_{-0.013}$	$100\theta_{eq}$	0.8165	$0.8169^{+0.0090}_{-0.0090}$
$n_s$	0.9661	$0.9656^{+0.0083}_{-0.0082}$	$\Omega_m$	0.3116	$0.311^{+0.013}_{-0.012}$	$100\theta_{s,eq}$	0.45108	$0.4513^{+0.0046}_{-0.0046}$
$dn_s/d\ln k$	-0.0054	$-0.008^{+0.015}_{-0.015}$	$\Omega_m h^2$	0.14223	$0.1422^{+0.0020}_{-0.0020}$	$r_{drag}/D_V(0.57)$	0.07156	$0.07160^{+0.00071}_{-0.00070}$
$r$	0.000	< 0.150	$\Omega_m h^3$	0.09609	$0.09612^{+0.00061}_{-0.00060}$	$H(0.57)$	92.998	$93.03^{+0.44}_{-0.43}$
$y_{cal}$	1.00021	$1.0005^{+0.0049}_{-0.0050}$	$\sigma_8$	0.8347	$0.833^{+0.026}_{-0.027}$	$D_A(0.57)$	1388.1	$1387^{+13}_{-13}$
$A_{217}^{CIB}$	66.2	$65^{+10}_{-10}$	$\sigma_8 \Omega_m^{0.5}$	0.4660	$0.464^{+0.017}_{-0.017}$	$F_{AP}(0.57)$	0.67606	$0.6759^{+0.0033}_{-0.0032}$
$\xi^{tSZ \times CIB}$	0.19	—	$\sigma_8 \Omega_m^{0.25}$	0.6237	$0.622^{+0.021}_{-0.021}$	$f\sigma_8(0.57)$	0.4854	$0.484^{+0.016}_{-0.016}$
$A_{143}^{tSZ}$	7.01	$5.1^{+3.7}_{-3.9}$	$\sigma_8/h^{0.5}$	1.0155	$1.013^{+0.033}_{-0.033}$	$\sigma_8(0.57)$	0.6209	$0.620^{+0.020}_{-0.020}$
$A_{100}^{PS}$	256	$264^{+50}_{-60}$	$\langle d^2 \rangle^{1/2}$	2.504	$2.495^{+0.075}_{-0.078}$	$r_{0.002}$	0.000	< 0.155
$A_{143}^{PS}$	42.4	$45^{+20}_{-20}$	$z_{re}$	10.78	$10.6^{+3.0}_{-3.1}$	$r_{0.01}$	0.000	< 0.150
$A_{143 \times 217}^{PS}$	39.0	$40^{+20}_{-20}$	$10^9 A_s$	2.240	$2.24^{+0.15}_{-0.15}$	$\ln(10^{10} A_t)$	-5.61	$-0.2^{+2.0}_{-2.5}$
$A_{217}^{PS}$	99.7	$97^{+20}_{-20}$	$10^9 A_s e^{-2\tau}$	1.8816	$1.883^{+0.023}_{-0.023}$	$r_{10}$	0.0001	< 0.0795
$A^{kSZ}$	0.0	—	$D_{40}$	1226.2	$1240^{+42}_{-39}$	$10^9 A_t$	0.000	< 0.338
$A_{100}^{\text{dust}TT}$	7.44	$7.4^{+3.7}_{-3.7}$	$D_{220}$	5724	$5726^{+79}_{-77}$	$10^9 A_t e^{-2\tau}$	0.000	< 0.284
$A_{143}^{\text{dust}TT}$	8.98	$8.9^{+3.6}_{-3.6}$	$D_{810}$	2536.3	$2537^{+27}_{-26}$	$f_{2000}^{143}$	29.6	$31^{+6}_{-6}$
$A_{143 \times 217}^{\text{dust}TT}$	17.8	$17.0^{+8.1}_{-8.2}$	$D_{1420}$	814.3	$813.7^{+9.8}_{-9.5}$	$f_{2000}^{143 \times 217}$	32.51	$33^{+4}_{-4}$
$A_{217}^{\text{dust}TT}$	82.1	$81^{+10}_{-10}$	$D_{2000}$	230.19	$229.8^{+3.5}_{-3.5}$	$f_{2000}^{217}$	105.97	$106.6^{+3.9}_{-3.9}$
$A_{100}^{\text{dust}EE}$	0.0819	$0.081^{+0.011}_{-0.011}$	$n_{s,0.002}$	0.9834	$0.993^{+0.049}_{-0.046}$	$\chi_{lowTEB}^2$	10495.6	10497.5 ( $\nu$ : 4.3)
$A_{100 \times 143}^{\text{dust}EE}$	0.0494	$0.0490^{+0.0099}_{-0.0098}$	$Y_P$	0.245377	$0.24539^{+0.00013}_{-0.00014}$	$\chi_{plik}^2$	2432.8	2452.3 ( $\nu$ : 24.8)
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.0996^{+0.064}_{-0.064}$	$Y_P^{BBN}$	0.246703	$0.24671^{+0.00013}_{-0.00014}$	$\chi_{6DF}^2$	0.038	0.060 ( $\nu$ : 0.0)
$A_{143}^{\text{dust}EE}$	0.1009	$0.100^{+0.013}_{-0.014}$	$10^5 D/H$	2.598	$2.594^{+0.055}_{-0.055}$	$\chi_{MGS}^2$	1.16	1.27 ( $\nu$ : 0.1)
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.223^{+0.091}_{-0.092}$	Age/Gyr	13.8003	$13.797^{+0.042}_{-0.043}$	$\chi_{DR11CMass}^2$	2.55	2.83 ( $\nu$ : 0.2)
$A_{217}^{\text{dust}EE}$	0.654	$0.65^{+0.25}_{-0.26}$	$z_*$	1089.899	$1089.87^{+0.48}_{-0.47}$	$\chi_{DR11LOWZ}^2$	0.75	0.79 ( $\nu$ : 0.1)
$A_{100}^{\text{dust}TE}$	0.141	$0.142^{+0.075}_{-0.074}$	$r_*$	144.652	$144.66^{+0.50}_{-0.49}$	$\chi_{prior}^2$	6.9	19.3 ( $\nu$ : 14.8)
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.058}_{-0.058}$	$100\theta_*$	1.04103	$1.04105^{+0.00059}_{-0.00057}$	$\chi_{CMB}^2$	12928.4	12949.8 ( $\nu$ : 24.1)
$A_{100 \times 217}^{\text{dust}TE}$	0.301	$0.30^{+0.16}_{-0.17}$	$D_A/\text{Gpc}$	13.8951	$13.896^{+0.048}_{-0.047}$	$\chi_{BAO}^2$	4.50	4.95 ( $\nu$ : 0.4)
$A_{143}^{\text{dust}TE}$	0.154	$0.16^{+0.11}_{-0.10}$	$z_{drag}$	1059.78	$1059.84^{+0.63}_{-0.61}$			
$A_{143 \times 217}^{\text{dust}TE}$	0.335	$0.33^{+0.16}_{-0.16}$	$r_{drag}$	147.33	$147.33^{+0.52}_{-0.51}$			

Best-fit  $\chi^2_{\text{eff}} = 12939.80$ ;  $\bar{\chi}^2_{\text{eff}} = 12974.09$ ;  $R - 1 = 0.01017$   
 $\chi^2_{\text{eff}}$ : BAO - 6DF: 0.04 MGS: 1.16 DR11CMASS: 2.55 DR11LOWZ: 0.75 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.60 plik\_dx11dr2\_HM\_v18\_TTTEEE:  
2432.79



## 18.8 base\_nrun\_r\_plikHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022309	$0.02233^{+0.00033}_{-0.00032}$	$A_{143}^{\text{dust}TE}$	0.154	$0.16^{+0.11}_{-0.10}$	$100\theta_*$	1.04101	$1.04101^{+0.00062}_{-0.00060}$
$\Omega_c h^2$	0.11961	$0.1194^{+0.0028}_{-0.0028}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.33^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.888	$13.891^{+0.058}_{-0.058}$
$100\theta_{\text{MC}}$	1.04082	$1.04082^{+0.00064}_{-0.00061}$	$A_{217}^{\text{dust}TE}$	1.660	$1.66^{+0.50}_{-0.49}$	$z_{\text{drag}}$	1059.78	$1059.81^{+0.66}_{-0.64}$
$\tau$	0.0856	$0.085^{+0.034}_{-0.035}$	$c_{100}$	0.99819	$0.9982^{+0.0016}_{-0.0015}$	$r_{\text{drag}}$	147.26	$147.28^{+0.62}_{-0.62}$
$\ln(10^{10} A_s)$	3.107	$3.105^{+0.068}_{-0.068}$	$c_{217}$	0.99607	$0.9961^{+0.0028}_{-0.0029}$	$k_D$	0.14064	$0.14064^{+0.00067}_{-0.00068}$
$n_s$	0.9646	$0.9649^{+0.0093}_{-0.0094}$	$H_0$	67.40	$67.5^{+1.3}_{-1.2}$	$100\theta_D$	0.160838	$0.16081^{+0.00038}_{-0.00038}$
$dn_s/d \ln k$	-0.0051	$-0.008^{+0.015}_{-0.015}$	$\Omega_\Lambda$	0.6862	$0.687^{+0.017}_{-0.018}$	$z_{\text{eq}}$	3392	$3388^{+64}_{-62}$
$r$	0.000	$< 0.150$	$\Omega_m$	0.3138	$0.313^{+0.018}_{-0.017}$	$k_{\text{eq}}$	0.010351	$0.01034^{+0.00019}_{-0.00019}$
$y_{\text{cal}}$	1.00029	$1.0004^{+0.0049}_{-0.0050}$	$\Omega_m h^2$	0.14257	$0.1424^{+0.0027}_{-0.0026}$	$100\theta_{\text{eq}}$	0.8150	$0.816^{+0.012}_{-0.012}$
$A_{217}^{\text{CIB}}$	67.9	$65^{+10}_{-10}$	$\Omega_m h^3$	0.09610	$0.09612^{+0.00062}_{-0.00060}$	$100\theta_{s,\text{eq}}$	0.4503	$0.4507^{+0.0061}_{-0.0061}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$\sigma_8$	0.8346	$0.833^{+0.026}_{-0.027}$	$r_{\text{drag}}/D_V(0.57)$	0.07144	$0.07150^{+0.00095}_{-0.00094}$
$A_{143}^{\text{tSZ}}$	7.25	$5.1^{+3.7}_{-3.9}$	$\sigma_8 \Omega_m^{0.5}$	0.4675	$0.466^{+0.019}_{-0.019}$	$H(0.57)$	92.94	$92.98^{+0.56}_{-0.53}$
$A_{100}^{\text{PS}}$	258	$264^{+50}_{-60}$	$\sigma_8 \Omega_m^{0.25}$	0.6246	$0.623^{+0.021}_{-0.022}$	$D_A(0.57)$	1390.2	$1389^{+17}_{-17}$
$A_{143}^{\text{PS}}$	39.3	$45^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0165	$1.014^{+0.033}_{-0.033}$	$F_{\text{AP}}(0.57)$	0.67661	$0.6764^{+0.0044}_{-0.0043}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.508	$2.497^{+0.076}_{-0.079}$	$f\sigma_8(0.57)$	0.4858	$0.484^{+0.016}_{-0.016}$
$A_{217}^{\text{PS}}$	97.0	$97^{+20}_{-20}$	$z_{\text{re}}$	10.64	$10.5^{+3.1}_{-3.2}$	$\sigma_8(0.57)$	0.6203	$0.619^{+0.020}_{-0.020}$
$A^{\text{kSZ}}$	0.0	—	$10^9 A_s$	2.235	$2.23^{+0.16}_{-0.15}$	$r_{0.002}$	0.000	$< 0.153$
$A_{100}^{\text{dust}TT}$	7.38	$7.4^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8830	$1.884^{+0.024}_{-0.024}$	$r_{0.01}$	0.000	$< 0.149$
$A_{143}^{\text{dust}TT}$	8.93	$8.9^{+3.6}_{-3.6}$	$D_{40}$	1229.9	$1241^{+43}_{-40}$	$\ln(10^{10} A_t)$	-6.44	$-0.2^{+2.0}_{-2.5}$
$A_{143 \times 217}^{\text{dust}TT}$	17.5	$17.0^{+8.1}_{-8.2}$	$D_{220}$	5726	$5725^{+79}_{-77}$	$r_{10}$	0.0000	$< 0.0790$
$A_{217}^{\text{dust}TT}$	81.7	$81^{+10}_{-10}$	$D_{810}$	2536.2	$2537^{+27}_{-27}$	$10^9 A_t$	0.000	$< 0.335$
$A_{100}^{\text{dust}EE}$	0.0816	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	813.8	$813.5^{+9.7}_{-9.7}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.282$
$A_{100 \times 143}^{\text{dust}EE}$	0.0492	$0.0489^{+0.0099}_{-0.0098}$	$D_{2000}$	229.98	$229.7^{+3.5}_{-3.6}$	$f_{2000}^{143}$	30.0	$31^{+6}_{-6}$
$A_{100 \times 217}^{\text{dust}EE}$	0.100	$0.0996^{+0.064}_{-0.063}$	$n_{s,0.002}$	0.9809	$0.992^{+0.049}_{-0.047}$	$f_{2000}^{143 \times 217}$	32.74	$33^{+4}_{-4}$
$A_{143}^{\text{dust}EE}$	0.1004	$0.100^{+0.013}_{-0.014}$	$Y_P$	0.245366	$0.24538^{+0.00014}_{-0.00015}$	$f_{2000}^{217}$	106.31	$106.6^{+4.0}_{-4.0}$
$A_{143 \times 217}^{\text{dust}EE}$	0.225	$0.223^{+0.091}_{-0.092}$	$Y_P^{\text{BBN}}$	0.246692	$0.24670^{+0.00015}_{-0.00015}$	$\chi_{\text{lowTEB}}^2$	10495.8	$10497.5 (\nu: 4.3)$
$A_{217}^{\text{dust}EE}$	0.652	$0.65^{+0.25}_{-0.26}$	$10^5 D/H$	2.603	$2.598^{+0.060}_{-0.061}$	$\chi_{\text{plik}}^2$	2432.2	$2452.6 (\nu: 25.2)$
$A_{100}^{\text{dust}TE}$	0.141	$0.142^{+0.075}_{-0.074}$	Age/Gyr	13.805	$13.801^{+0.050}_{-0.052}$	$\chi_{\text{JLA}}^2$	706.82	$706.85 (\nu: 0.0)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.059}_{-0.058}$	$z_*$	1089.96	$1089.92^{+0.58}_{-0.58}$	$\chi_{\text{prior}}^2$	7.1	$19.3 (\nu: 14.9)$
$A_{100 \times 217}^{\text{dust}TE}$	0.304	$0.30^{+0.17}_{-0.17}$	$r_*$	144.58	$144.60^{+0.62}_{-0.62}$	$\chi_{\text{CMB}}^2$	12928.0	$12950.1 (\nu: 24.6)$

Best-fit  $\chi_{\text{eff}}^2 = 13641.97$ ;  $\bar{\chi}_{\text{eff}}^2 = 13676.29$ ;  $R - 1 = 0.01141$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.80 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2432.24 SN - JLA December\_2013: 706.82

## 18.9 base\_nrun\_r\_plikHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022325	$0.02234^{+0.00033}_{-0.00032}$	$A_{143}^{\text{dust}TE}$	0.156	$0.16^{+0.11}_{-0.10}$	$100\theta_*$	1.04101	$1.04102^{+0.00062}_{-0.00060}$
$\Omega_c h^2$	0.11950	$0.1194^{+0.0029}_{-0.0028}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.33^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.890	$13.891^{+0.059}_{-0.059}$
$100\theta_{\text{MC}}$	1.04082	$1.04083^{+0.00064}_{-0.00061}$	$A_{217}^{\text{dust}TE}$	1.663	$1.66^{+0.50}_{-0.49}$	$z_{\text{drag}}$	1059.78	$1059.83^{+0.64}_{-0.65}$
$\tau$	0.0854	$0.085^{+0.035}_{-0.035}$	$c_{100}$	0.99821	$0.9982^{+0.0016}_{-0.0015}$	$r_{\text{drag}}$	147.27	$147.28^{+0.62}_{-0.62}$
$\ln(10^{10} A_s)$	3.106	$3.106^{+0.068}_{-0.068}$	$c_{217}$	0.99600	$0.9961^{+0.0028}_{-0.0029}$	$k_D$	0.14064	$0.14064^{+0.00067}_{-0.00069}$
$n_s$	0.9652	$0.9650^{+0.0094}_{-0.0095}$	$H_0$	67.46	$67.5^{+1.3}_{-1.3}$	$100\theta_D$	0.160821	$0.16081^{+0.00038}_{-0.00038}$
$dn_s/d \ln k$	-0.0045	$-0.009^{+0.015}_{-0.015}$	$\Omega_\Lambda$	0.6869	$0.687^{+0.017}_{-0.018}$	$z_{\text{eq}}$	3389	$3387^{+65}_{-63}$
$r$	0.000	$< 0.150$	$\Omega_m$	0.3131	$0.313^{+0.018}_{-0.017}$	$k_{\text{eq}}$	0.010344	$0.01034^{+0.00020}_{-0.00019}$
$y_{\text{cal}}$	1.00036	$1.0004^{+0.0049}_{-0.0050}$	$\Omega_m h^2$	0.14247	$0.1424^{+0.0027}_{-0.0026}$	$100\theta_{\text{eq}}$	0.8154	$0.816^{+0.012}_{-0.012}$
$A_{217}^{\text{CIB}}$	66.8	$65^{+10}_{-10}$	$\Omega_m h^3$	0.09611	$0.09612^{+0.00062}_{-0.00061}$	$100\theta_{s,\text{eq}}$	0.4505	$0.4508^{+0.0062}_{-0.0062}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.09	—	$\sigma_8$	0.8342	$0.833^{+0.026}_{-0.027}$	$r_{\text{drag}}/D_V(0.57)$	0.07148	$0.07152^{+0.00097}_{-0.00095}$
$A_{143}^{\text{tSZ}}$	7.07	$5.1^{+3.7}_{-3.9}$	$\sigma_8 \Omega_m^{0.5}$	0.4668	$0.466^{+0.020}_{-0.019}$	$H(0.57)$	92.96	$92.99^{+0.57}_{-0.54}$
$A_{100}^{\text{PS}}$	257	$264^{+50}_{-60}$	$\sigma_8 \Omega_m^{0.25}$	0.6240	$0.623^{+0.021}_{-0.022}$	$D_A(0.57)$	1389.5	$1389^{+17}_{-17}$
$A_{143}^{\text{PS}}$	40.6	$45^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0157	$1.014^{+0.033}_{-0.033}$	$F_{\text{AP}}(0.57)$	0.67643	$0.6763^{+0.0045}_{-0.0044}$
$A_{143 \times 217}^{\text{PS}}$	35.7	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.507	$2.497^{+0.076}_{-0.080}$	$f\sigma_8(0.57)$	0.4855	$0.484^{+0.016}_{-0.016}$
$A_{217}^{\text{PS}}$	98.6	$97^{+20}_{-20}$	$z_{\text{re}}$	10.62	$10.5^{+3.1}_{-3.2}$	$\sigma_8(0.57)$	0.6202	$0.619^{+0.020}_{-0.020}$
$A^{\text{kSZ}}$	0.0	—	$10^9 A_s$	2.234	$2.23^{+0.16}_{-0.15}$	$r_{0.002}$	0.000	$< 0.154$
$A_{100}^{\text{dust}TT}$	7.37	$7.4^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8830	$1.884^{+0.025}_{-0.024}$	$r_{0.01}$	0.000	$< 0.149$
$A_{143}^{\text{dust}TT}$	8.91	$8.9^{+3.6}_{-3.6}$	$D_{40}$	1230.4	$1241^{+42}_{-40}$	$\ln(10^{10} A_t)$	-7.46	$-0.2^{+2.0}_{-2.5}$
$A_{143 \times 217}^{\text{dust}TT}$	17.4	$17.0^{+8.1}_{-8.2}$	$D_{220}$	5729	$5725^{+78}_{-78}$	$r_{10}$	0.0000	$< 0.0793$
$A_{217}^{\text{dust}TT}$	81.8	$81^{+10}_{-10}$	$D_{810}$	2537.1	$2538^{+27}_{-27}$	$10^9 A_t$	0.000	$< 0.336$
$A_{100}^{\text{dust}EE}$	0.0817	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	814.4	$813.6^{+9.7}_{-9.7}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.283$
$A_{100 \times 143}^{\text{dust}EE}$	0.0494	$0.0489^{+0.0099}_{-0.0098}$	$D_{2000}$	230.24	$229.7^{+3.5}_{-3.6}$	$f_{2000}^{143}$	29.7	$31^{+6}_{-6}$
$A_{100 \times 217}^{\text{dust}EE}$	0.0998	$0.0996^{+0.064}_{-0.063}$	$n_{s,0.002}$	0.9797	$0.993^{+0.050}_{-0.047}$	$f_{2000}^{143 \times 217}$	32.46	$33^{+4}_{-4}$
$A_{143}^{\text{dust}EE}$	0.1008	$0.100^{+0.013}_{-0.014}$	$Y_P$	0.245373	$0.24538^{+0.00014}_{-0.00015}$	$f_{2000}^{217}$	106.06	$106.6^{+4.0}_{-4.0}$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.223^{+0.091}_{-0.092}$	$Y_P^{\text{BBN}}$	0.246699	$0.24671^{+0.00014}_{-0.00015}$	$\chi_{\text{lowTEB}}^2$	10495.9	$10497.5 (\nu: 4.3)$
$A_{217}^{\text{dust}EE}$	0.653	$0.65^{+0.25}_{-0.26}$	$10^5 D/H$	2.600	$2.597^{+0.061}_{-0.061}$	$\chi_{\text{plik}}^2$	2432.4	$2452.6 (\nu: 25.4)$
$A_{100}^{\text{dust}TE}$	0.140	$0.142^{+0.075}_{-0.074}$	Age/Gyr	13.803	$13.800^{+0.051}_{-0.053}$	$\chi_{\text{H070p6}}^2$	0.89	$0.89 (\nu: 0.1)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.059}_{-0.058}$	$z_*$	1089.93	$1089.90^{+0.59}_{-0.59}$	$\chi_{\text{prior}}^2$	6.9	$19.3 (\nu: 14.9)$
$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.17}_{-0.17}$	$r_*$	144.59	$144.61^{+0.63}_{-0.63}$	$\chi_{\text{CMB}}^2$	12928.3	$12950.2 (\nu: 24.7)$

Best-fit  $\chi_{\text{eff}}^2 = 12936.05$ ;  $\bar{\chi}_{\text{eff}}^2 = 12970.39$ ;  $R - 1 = 0.01160$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.88 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2432.38 Hubble - H070p6: 0.89

## 18.10 base\_nrun\_r\_plikHM\_TTTEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00033}_{-0.00032}$	$A_{143}^{\text{dust}TE}$	$0.16^{+0.11}_{-0.10}$	$100\theta_*$	$1.04099^{+0.00063}_{-0.00060}$
$\Omega_c h^2$	$0.1196^{+0.0029}_{-0.0029}$	$A_{143 \times 217}^{\text{dust}TE}$	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	$13.887^{+0.059}_{-0.059}$
$100\theta_{\text{MC}}$	$1.04080^{+0.00064}_{-0.00061}$	$A_{217}^{\text{dust}TE}$	$1.66^{+0.50}_{-0.49}$	$z_{\text{drag}}$	$1059.80^{+0.67}_{-0.65}$
$\tau$	$0.084^{+0.034}_{-0.033}$	$c_{100}$	$0.9982^{+0.0016}_{-0.0015}$	$r_{\text{drag}}$	$147.24^{+0.64}_{-0.64}$
$\ln(10^{10} A_s)$	$3.105^{+0.067}_{-0.064}$	$c_{217}$	$0.9961^{+0.0028}_{-0.0029}$	$k_D$	$0.14067^{+0.00068}_{-0.00069}$
$n_s$	$0.9644^{+0.0096}_{-0.0096}$	$H_0$	$67.4^{+1.3}_{-1.3}$	$100\theta_D$	$0.16082^{+0.00038}_{-0.00038}$
$dn_s/d \ln k$	$-0.009^{+0.015}_{-0.015}$	$\Omega_\Lambda$	$0.686^{+0.017}_{-0.018}$	$z_{\text{eq}}$	$3393^{+65}_{-64}$
$r$	$< 0.149$	$\Omega_m$	$0.314^{+0.018}_{-0.017}$	$k_{\text{eq}}$	$0.01035^{+0.00020}_{-0.00020}$
$y_{\text{cal}}$	$1.0004^{+0.0049}_{-0.0050}$	$\Omega_m h^2$	$0.1426^{+0.0027}_{-0.0027}$	$100\theta_{\text{eq}}$	$0.815^{+0.012}_{-0.012}$
$A_{217}^{\text{CIB}}$	$65^{+10}_{-10}$	$\Omega_m h^3$	$0.09611^{+0.00062}_{-0.00060}$	$100\theta_{s,\text{eq}}$	$0.4502^{+0.0063}_{-0.0063}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\sigma_8$	$0.833^{+0.026}_{-0.025}$	$r_{\text{drag}}/D_V(0.57)$	$0.07143^{+0.00098}_{-0.00097}$
$A_{143}^{\text{tSZ}}$	$5.1^{+3.7}_{-3.9}$	$\sigma_8 \Omega_m^{0.5}$	$0.467^{+0.020}_{-0.019}$	$H(0.57)$	$92.94^{+0.58}_{-0.54}$
$A_{100}^{\text{PS}}$	$264^{+50}_{-60}$	$\sigma_8 \Omega_m^{0.25}$	$0.624^{+0.021}_{-0.021}$	$D_A(0.57)$	$1390^{+17}_{-17}$
$A_{143}^{\text{PS}}$	$45^{+20}_{-20}$	$\sigma_8/h^{0.5}$	$1.015^{+0.033}_{-0.032}$	$F_{\text{AP}}(0.57)$	$0.6767^{+0.0046}_{-0.0044}$
$A_{143 \times 217}^{\text{PS}}$	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	$2.499^{+0.076}_{-0.076}$	$f\sigma_8(0.57)$	$0.485^{+0.016}_{-0.015}$
$A_{217}^{\text{PS}}$	$97^{+20}_{-20}$	$z_{\text{re}}$	$10.5^{+2.9}_{-3.0}$	$\sigma_8(0.57)$	$0.619^{+0.020}_{-0.020}$
$A^{\text{kSZ}}$	—	$10^9 A_s$	$2.23^{+0.15}_{-0.15}$	$r_{0.002}$	$< 0.152$
$A_{100}^{\text{dust}TT}$	$7.4^{+3.7}_{-3.6}$	$10^9 A_s e^{-2\tau}$	$1.885^{+0.025}_{-0.024}$	$r_{0.01}$	$< 0.148$
$A_{143}^{\text{dust}TT}$	$8.9^{+3.6}_{-3.6}$	$D_{40}$	$1241^{+42}_{-40}$	$\ln(10^{10} A_t)$	$-0.2^{+2.0}_{-2.5}$
$A_{143 \times 217}^{\text{dust}TT}$	$17.0^{+8.1}_{-8.2}$	$D_{220}$	$5724^{+78}_{-77}$	$r_{10}$	$< 0.0780$
$A_{217}^{\text{dust}TT}$	$81^{+10}_{-10}$	$D_{810}$	$2538^{+27}_{-27}$	$10^9 A_t$	$< 0.331$
$A_{100}^{\text{dust}EE}$	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	$813.4^{+9.7}_{-9.7}$	$10^9 A_t e^{-2\tau}$	$< 0.280$
$A_{100 \times 143}^{\text{dust}EE}$	$0.0488^{+0.0099}_{-0.0098}$	$D_{2000}$	$229.6^{+3.5}_{-3.6}$	$f_{2000}^{143}$	$31^{+6}_{-6}$
$A_{100 \times 217}^{\text{dust}EE}$	$0.0996^{+0.064}_{-0.063}$	$n_{s,0.002}$	$0.992^{+0.049}_{-0.046}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A_{143}^{\text{dust}EE}$	$0.100^{+0.013}_{-0.014}$	$Y_P$	$0.24537^{+0.00015}_{-0.00015}$	$f_{2000}^{217}$	$106.7^{+4.0}_{-4.0}$
$A_{143 \times 217}^{\text{dust}EE}$	$0.223^{+0.091}_{-0.092}$	$Y_P^{\text{BBN}}$	$0.24670^{+0.00015}_{-0.00015}$	$\chi_{\text{lowTEB}}^2$	$10497.5 (\nu: 4.3)$
$A_{217}^{\text{dust}EE}$	$0.65^{+0.25}_{-0.26}$	$10^5 D/H$	$2.601^{+0.061}_{-0.062}$	$\chi_{\text{plik}}^2$	$2452.6 (\nu: 25.0)$
$A_{100}^{\text{dust}TE}$	$0.142^{+0.075}_{-0.074}$	$\text{Age/Gyr}$	$13.804^{+0.051}_{-0.053}$	$\chi_{\text{prior}}^2$	$19.3 (\nu: 14.9)$
$A_{100 \times 143}^{\text{dust}TE}$	$0.132^{+0.059}_{-0.057}$	$z_*$	$1089.95^{+0.60}_{-0.59}$	$\chi_{\text{CMB}}^2$	$12950.1 (\nu: 24.3)$
$A_{100 \times 217}^{\text{dust}TE}$	$0.30^{+0.17}_{-0.17}$	$r_*$	$144.56^{+0.64}_{-0.64}$		

$$\bar{\chi}_{\text{eff}}^2 = 12969.39; R - 1 = 0.01187$$

### 18.11 base\_nrun\_r\_CamSpecHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02233	$0.02245^{+0.00055}_{-0.00052}$ (+0.0 $\sigma$ )	$\Omega_\Lambda$	0.6872	$0.691^{+0.026}_{-0.027}$ (+0.1 $\sigma$ )	$100\theta_D$	0.16082	$0.16070^{+0.00062}_{-0.00062}$ (-0.0 $\sigma$ )
$\Omega_c h^2$	0.11952	$0.1189^{+0.0043}_{-0.0043}$ (-0.1 $\sigma$ )	$\Omega_m$	0.3128	$0.309^{+0.027}_{-0.026}$ (-0.1 $\sigma$ )	$z_{\text{eq}}$	3390	$3378^{+97}_{-97}$ (-0.1 $\sigma$ )
$100\theta_{\text{MC}}$	1.04093	$1.04105^{+0.00097}_{-0.00096}$ (+0.1 $\sigma$ )	$\Omega_m h^2$	0.14249	$0.1420^{+0.0041}_{-0.0040}$ (-0.1 $\sigma$ )	$100\theta_{\text{eq}}$	0.8154	$0.818^{+0.019}_{-0.018}$ (+0.1 $\sigma$ )
$\tau$	0.0829	$0.091^{+0.046}_{-0.042}$ (+0.0 $\sigma$ )	$\Omega_m h^3$	0.09617	$0.0963^{+0.0010}_{-0.0010}$ (-0.0 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07150	$0.0717^{+0.0016}_{-0.0015}$ (+0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.099	$3.114^{+0.091}_{-0.083}$ (-0.0 $\sigma$ )	$\sigma_8$	0.8309	$0.835^{+0.033}_{-0.031}$ (-0.0 $\sigma$ )	$H(0.57)$	92.99	$93.18^{+0.95}_{-0.93}$ (+0.1 $\sigma$ )
$n_s$	0.9654	$0.969^{+0.013}_{-0.013}$ (+0.4 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4647	$0.464^{+0.026}_{-0.026}$ (-0.1 $\sigma$ )	$D_A(0.57)$	1388.9	$1384^{+27}_{-28}$ (-0.1 $\sigma$ )
$dn_s/d \ln k$	-0.0082	$-0.012^{+0.017}_{-0.018}$ (+0.1 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6214	$0.622^{+0.027}_{-0.026}$ (-0.1 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6764	$0.6753^{+0.0069}_{-0.0068}$ (-0.1 $\sigma$ )
$r$	0.000	< 0.165 (-0.0 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0113	$1.013^{+0.041}_{-0.039}$ (-0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4834	$0.484^{+0.020}_{-0.019}$ (-0.1 $\sigma$ )
$y_{\text{cal}}$	1.00048	$1.0003^{+0.0050}_{-0.0048}$ (-0.0 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.489	$2.484^{+0.092}_{-0.092}$ (-0.2 $\sigma$ )	$\sigma_8(0.57)$	0.6178	$0.622^{+0.026}_{-0.024}$ (+0.0 $\sigma$ )
$A_{100}^{\text{PS}}$	256.7	$249^{+40}_{-50}$ (-0.5 $\sigma$ )	$z_{\text{re}}$	10.40	$10.9^{+3.6}_{-3.8}$ (+0.0 $\sigma$ )	$r_{0.002}$	0.000	< 0.177 (-0.0 $\sigma$ )
$A_{143}^{\text{PS}}$	36.9	$40^{+20}_{-20}$ (-0.6 $\sigma$ )	$10^9 A_s$	2.218	$2.25^{+0.21}_{-0.19}$ (-0.0 $\sigma$ )	$r_{0.01}$	0.000	< 0.167 (-0.0 $\sigma$ )
$A_{217}^{\text{PS}}$	92.9	$97^{+30}_{-30}$ (+0.1 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.8791	$1.877^{+0.028}_{-0.028}$ (-0.4 $\sigma$ )	$\ln(10^{10} A_t)$	-5.67	$-0.2^{+2.0}_{-2.5}$ (-0.0 $\sigma$ )
$A_{217}^{\text{CIB}}$	48.1	$47^{+10}_{-10}$ (-2.7 $\sigma$ )	$D_{40}$	1215.3	$1224^{+46}_{-46}$ (-0.3 $\sigma$ )	$r_{10}$	0.0001	< 0.0911 (-0.0 $\sigma$ )
$A_{143}^{\text{tSZ}}$	2.24	< 6.45 (-0.9 $\sigma$ )	$D_{220}$	5705	$5697^{+83}_{-81}$ (-0.5 $\sigma$ )	$10^9 A_t$	0.000	< 0.374 (-0.0 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.381	$0.51^{+0.22}_{-0.20}$	$D_{810}$	2532.0	$2533^{+28}_{-27}$ (-0.3 $\sigma$ )	$10^9 A_t e^{-2\tau}$	0.000	< 0.309 (-0.0 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{1420}$	812.3	$814^{+10}_{-10}$ (+0.0 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246284	$0.24633^{+0.00023}_{-0.00023}$ (-3.3 $\sigma$ )
$A^{\text{kSZ}}$	7.1	—	$n_{\text{s},0.002}$	0.992	$1.006^{+0.061}_{-0.060}$ (-0.0 $\sigma$ )	$f_{2000}^{143}$	30.9	$30^{+6}_{-6}$ (-0.5 $\sigma$ )
$A_{100}^{\text{dust}}$	1.000	$0.99^{+0.38}_{-0.38}$	$Y_{\text{P}}$	0.244953	$0.24501^{+0.00023}_{-0.00022}$ (-3.3 $\sigma$ )	$f_{2000}^{217}$	107.82	$106.9^{+4.2}_{-4.3}$ (+0.1 $\sigma$ )
$A_{143}^{\text{dust}}$	1.026	$1.02^{+0.36}_{-0.36}$	Age/Gyr	13.799	$13.781^{+0.083}_{-0.089}$ (-0.1 $\sigma$ )	$f_{2000}^{143 \times 217}$	32.94	$32^{+5}_{-5}$ (-0.4 $\sigma$ )
$A_{217}^{\text{dust}}$	1.224	$1.21^{+0.23}_{-0.23}$	$z_*$	1089.91	$1089.72^{+0.92}_{-0.95}$ (-0.1 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10494.1	$10496.7 (\nu: 4.5)$ (-0.1 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.953	$0.98^{+0.35}_{-0.35}$	$r_*$	144.59	$144.66^{+0.97}_{-0.95}$ (+0.1 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	8045.5	$8061.3 (\nu: 18.9)$
$c_{100}$	0.99669	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	$100\theta_*$	1.04113	$1.04123^{+0.00095}_{-0.00094}$ (+0.1 $\sigma$ )	$\chi_{\text{prior}}^2$	3.8	$8.4 (\nu: 6.2)$ (+0.3 $\sigma$ )
$c_{217}$	0.99771	$0.9973^{+0.0035}_{-0.0034}$ (+0.9 $\sigma$ )	$z_{\text{drag}}$	1059.78	$1060.0^{+1.1}_{-1.1}$ (-0.0 $\sigma$ )	$\chi_{\text{CMB}}^2$	18539.6	$18558.0 (\nu: 19.0)$ (+1219.1 $\sigma$ )
$\beta_1^1$	-0.21	$-0.1^{+1.9}_{-2.0}$	$r_{\text{drag}}$	147.27	$147.30^{+0.97}_{-0.94}$ (+0.1 $\sigma$ )			
$H_0$	67.49	$67.9^{+2.1}_{-2.0}$ (+0.1 $\sigma$ )	$k_{\text{D}}$	0.14067	$0.1407^{+0.0011}_{-0.0011}$ (-0.1 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 18543.37$ ;  $\Delta\chi_{\text{eff}}^2 = 7282.25$ ;  $\bar{\chi}_{\text{eff}}^2 = 18566.33$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7282.57$ ;  $R - 1 = 0.00729$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.11 ( $\Delta$  -0.95) CamSpec like\_v9.10CMH\_unified: 8045.46

## 18.12 base\_nrun\_r\_CamSpecHM\_TT\_lowTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00047}_{-0.00045} \quad (-0.0\sigma)$	$\Omega_m$	$0.308^{+0.015}_{-0.015} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.818^{+0.011}_{-0.011} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1188^{+0.0025}_{-0.0025} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1419^{+0.0024}_{-0.0024} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07176^{+0.00087}_{-0.00083} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04106^{+0.00083}_{-0.00083} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.0963^{+0.0010}_{-0.0010} \quad (-0.0\sigma)$	$H(0.57)$	$93.19^{+0.60}_{-0.58} \quad (+0.0\sigma)$
$\tau$	$0.090^{+0.042}_{-0.039} \quad (-0.0\sigma)$	$\sigma_8$	$0.834^{+0.033}_{-0.030} \quad (-0.0\sigma)$	$D_A(0.57)$	$1383^{+16}_{-16} \quad (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.113^{+0.085}_{-0.079} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.463^{+0.022}_{-0.020} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6751^{+0.0039}_{-0.0039} \quad (-0.1\sigma)$
$n_s$	$0.9692^{+0.0095}_{-0.0091} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.622^{+0.026}_{-0.024} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.484^{+0.020}_{-0.018} \quad (-0.0\sigma)$
$dn_s/d \ln k$	$-0.011^{+0.017}_{-0.018} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.013^{+0.040}_{-0.037} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.622^{+0.025}_{-0.023} \quad (-0.0\sigma)$
$r$	$< 0.164 \quad (-0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.483^{+0.089}_{-0.087} \quad (-0.1\sigma)$	$r_{0.002}$	$< 0.174 \quad (-0.0\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0048} \quad (-0.1\sigma)$	$z_{\text{re}}$	$10.9^{+3.3}_{-3.5} \quad (-0.0\sigma)$	$r_{0.01}$	$< 0.165 \quad (-0.0\sigma)$
$A_{100}^{\text{PS}}$	$248^{+40}_{-50} \quad (-0.5\sigma)$	$10^9 A_s$	$2.25^{+0.20}_{-0.18} \quad (-0.1\sigma)$	$\ln(10^{10} A_t)$	$-0.2^{+2.0}_{-2.4} \quad (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.024}_{-0.024} \quad (-0.4\sigma)$	$r_{10}$	$< 0.0901 \quad (-0.0\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.1\sigma)$	$D_{40}$	$1224^{+44}_{-43} \quad (-0.3\sigma)$	$10^9 A_t$	$< 0.369 \quad (-0.0\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$D_{220}$	$5697^{+81}_{-79} \quad (-0.5\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.307 \quad (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.45 \quad (-0.9\sigma)$	$D_{810}$	$2533^{+28}_{-27} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24634^{+0.00020}_{-0.00019} \quad (-3.9\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.20}$	$D_{1420}$	$814^{+10}_{-9.8} \quad (-0.0\sigma)$	$f_{2000}^{143}$	$30^{+6}_{-6} \quad (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$n_{\text{s},0.002}$	$1.006^{+0.058}_{-0.055} \quad (-0.0\sigma)$	$f_{2000}^{217}$	$106.9^{+4.2}_{-4.2} \quad (+0.1\sigma)$
$A^{\text{kSZ}}$	—	$Y_{\text{P}}$	$0.24501^{+0.00020}_{-0.00019} \quad (-3.9\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-5} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$\text{Age}/\text{Gyr}$	$13.780^{+0.063}_{-0.065} \quad (-0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.5 \quad (\nu: 4.2) \quad (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$z_*$	$1089.70^{+0.66}_{-0.67} \quad (-0.0\sigma)$	$\chi_{\text{CamSpec}}^2$	$8060.9 \quad (\nu: 18.2)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$r_*$	$144.68^{+0.65}_{-0.65} \quad (+0.1\sigma)$	$\chi_{6\text{DF}}^2$	$0.051 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$100\theta_*$	$1.04125^{+0.00083}_{-0.00082} \quad (+0.1\sigma)$	$\chi_{\text{MGS}}^2$	$1.49 \quad (\nu: 0.2) \quad (+0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$z_{\text{drag}}$	$1060.0^{+1.1}_{-1.0} \quad (-0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.88 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$r_{\text{drag}}$	$147.32^{+0.72}_{-0.71} \quad (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.62 \quad (\nu: 0.2) \quad (-0.1\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$k_{\text{D}}$	$0.14070^{+0.00098}_{-0.00097} \quad (-0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.2) \quad (+0.3\sigma)$
$H_0$	$67.9^{+1.2}_{-1.1} \quad (+0.0\sigma)$	$100\theta_{\text{D}}$	$0.16069^{+0.00058}_{-0.00059} \quad (+0.0\sigma)$	$\chi_{\text{CMB}}^2$	$18557.4 \quad (\nu: 18.2) \quad (+1019.1\sigma)$
$\Omega_{\Lambda}$	$0.692^{+0.015}_{-0.015} \quad (+0.1\sigma)$	$z_{\text{eq}}$	$3376^{+58}_{-58} \quad (-0.1\sigma)$	$\chi_{\text{BAO}}^2$	$5.04 \quad (\nu: 0.5) \quad (-0.0\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 18570.78; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.57; R - 1 = 0.00727$$

### 18.13 base\_nrun\_r\_CamSpecHM\_TT\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02247^{+0.00053}_{-0.00050} \quad (+0.0\sigma)$	$\Omega_\Lambda$	$0.693^{+0.024}_{-0.025} \quad (+0.1\sigma)$	$100\theta_D$	$0.16068^{+0.00061}_{-0.00061} \quad (-0.0\sigma)$
$\Omega_c h^2$	$0.1186^{+0.0041}_{-0.0041} \quad (-0.1\sigma)$	$\Omega_m$	$0.307^{+0.025}_{-0.024} \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3371^{+91}_{-90} \quad (-0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04109^{+0.00094}_{-0.00095} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1417^{+0.0038}_{-0.0038} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.819^{+0.018}_{-0.017} \quad (+0.1\sigma)$
$\tau$	$0.092^{+0.046}_{-0.042} \quad (+0.0\sigma)$	$\Omega_m h^3$	$0.0963^{+0.0010}_{-0.0010} \quad (-0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0719^{+0.0015}_{-0.0014} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.116^{+0.091}_{-0.082} \quad (-0.0\sigma)$	$\sigma_8$	$0.835^{+0.033}_{-0.030} \quad (-0.0\sigma)$	$H(0.57)$	$93.24^{+0.89}_{-0.88} \quad (+0.1\sigma)$
$n_s$	$0.970^{+0.013}_{-0.012} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.462^{+0.026}_{-0.025} \quad (-0.1\sigma)$	$D_A(0.57)$	$1382^{+25}_{-26} \quad (-0.1\sigma)$
$dn_s/d \ln k$	$-0.012^{+0.017}_{-0.018} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.621^{+0.027}_{-0.026} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6748^{+0.0064}_{-0.0063} \quad (-0.1\sigma)$
$r$	$< 0.167 \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$1.012^{+0.041}_{-0.039} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.484^{+0.020}_{-0.019} \quad (-0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0048} \quad (-0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.482^{+0.092}_{-0.091} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.622^{+0.026}_{-0.024} \quad (+0.0\sigma)$
$A_{100}^{\text{PS}}$	$248^{+40}_{-50} \quad (-0.5\sigma)$	$z_{\text{re}}$	$11.0^{+3.6}_{-3.7} \quad (+0.0\sigma)$	$r_{0.002}$	$< 0.180 \quad (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$10^9 A_s$	$2.26^{+0.21}_{-0.19} \quad (-0.0\sigma)$	$r_{0.01}$	$< 0.169 \quad (-0.0\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.027}_{-0.027} \quad (-0.4\sigma)$	$\ln(10^{10} A_t)$	$-0.2^{+2.0}_{-2.5} \quad (-0.0\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$D_{40}$	$1223^{+46}_{-45} \quad (-0.3\sigma)$	$r_{10}$	$< 0.0925 \quad (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.46 \quad (-0.9\sigma)$	$D_{220}$	$5698^{+82}_{-80} \quad (-0.5\sigma)$	$10^9 A_t$	$< 0.379 \quad (-0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.20}$	$D_{810}$	$2533^{+28}_{-27} \quad (-0.3\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.313 \quad (-0.0\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{1420}$	$814^{+10}_{-10} \quad (-0.0\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24634^{+0.00023}_{-0.00022} \quad (-3.4\sigma)$
$A^{\text{kSZ}}$	—	$n_{\text{s},0.002}$	$1.008^{+0.061}_{-0.060} \quad (-0.0\sigma)$	$f_{2000}^{143}$	$30^{+6}_{-6} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$Y_{\text{P}}$	$0.24502^{+0.00022}_{-0.00021} \quad (-3.4\sigma)$	$f_{2000}^{217}$	$106.9^{+4.2}_{-4.3} \quad (+0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$\text{Age/Gyr}$	$13.776^{+0.079}_{-0.085} \quad (-0.1\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-5} \quad (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$z_*$	$1089.66^{+0.88}_{-0.90} \quad (-0.1\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.7 \quad (\nu: 4.6) \quad (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$r_*$	$144.72^{+0.93}_{-0.90} \quad (+0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.2 \quad (\nu: 18.7)$
$c_{100}$	$0.9968^{+0.0020}_{-0.0019} \quad (-1.4\sigma)$	$100\theta_*$	$1.04127^{+0.00092}_{-0.00092} \quad (+0.1\sigma)$	$\chi_{\text{JLA}}^2$	$706.76 \quad (\nu: 0.1) \quad (-0.1\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$z_{\text{drag}}$	$1060.1^{+1.1}_{-1.1} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.2) \quad (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$r_{\text{drag}}$	$147.36^{+0.93}_{-0.90} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18558.0 \quad (\nu: 18.8) \quad (+933.1\sigma)$
$H_0$	$68.0^{+1.9}_{-1.8} \quad (+0.1\sigma)$	$k_D$	$0.1407^{+0.0010}_{-0.0011} \quad (-0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 19273.08; \Delta \bar{\chi}_{\text{eff}}^2 = 7282.51; R - 1 = 0.00801$$

### 18.14 base\_nrun\_r\_CamSpecHM\_TT\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02249^{+0.00055}_{-0.00051} \quad (-0.0\sigma)$	$\Omega_\Lambda$	$0.694^{+0.025}_{-0.026} \quad (+0.1\sigma)$	$100\theta_D$	$0.16066^{+0.00061}_{-0.00061} \quad (+0.0\sigma)$
$\Omega_c h^2$	$0.1184^{+0.0042}_{-0.0042} \quad (-0.1\sigma)$	$\Omega_m$	$0.306^{+0.026}_{-0.025} \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3367^{+94}_{-94} \quad (-0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04112^{+0.00095}_{-0.00095} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1416^{+0.0039}_{-0.0039} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.820^{+0.019}_{-0.018} \quad (+0.1\sigma)$
$\tau$	$0.093^{+0.047}_{-0.042} \quad (+0.0\sigma)$	$\Omega_m h^3$	$0.0964^{+0.0010}_{-0.0010} \quad (-0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0719^{+0.0015}_{-0.0014} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.118^{+0.091}_{-0.082} \quad (-0.0\sigma)$	$\sigma_8$	$0.835^{+0.033}_{-0.031} \quad (-0.0\sigma)$	$H(0.57)$	$93.28^{+0.92}_{-0.92} \quad (+0.1\sigma)$
$n_s$	$0.970^{+0.013}_{-0.012} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.462^{+0.026}_{-0.025} \quad (-0.1\sigma)$	$D_A(0.57)$	$1381^{+26}_{-27} \quad (-0.1\sigma)$
$dn_s/d \ln k$	$-0.012^{+0.017}_{-0.019} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.621^{+0.027}_{-0.026} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6745^{+0.0066}_{-0.0066} \quad (-0.1\sigma)$
$r$	$< 0.168 \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$1.012^{+0.041}_{-0.039} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.484^{+0.020}_{-0.019} \quad (-0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0048} \quad (-0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.481^{+0.092}_{-0.091} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.623^{+0.027}_{-0.024} \quad (-0.0\sigma)$
$A_{100}^{\text{PS}}$	$248^{+40}_{-50} \quad (-0.5\sigma)$	$z_{\text{re}}$	$11.1^{+3.6}_{-3.7} \quad (+0.0\sigma)$	$r_{0.002}$	$< 0.183 \quad (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$10^9 A_s$	$2.26^{+0.21}_{-0.19} \quad (-0.0\sigma)$	$r_{0.01}$	$< 0.171 \quad (-0.0\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.028}_{-0.027} \quad (-0.4\sigma)$	$\ln(10^{10} A_t)$	$-0.1^{+2.0}_{-2.5} \quad (-0.0\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$D_{40}$	$1223^{+47}_{-43} \quad (-0.3\sigma)$	$r_{10}$	$< 0.0941 \quad (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.47 \quad (-0.9\sigma)$	$D_{220}$	$5699^{+82}_{-80} \quad (-0.5\sigma)$	$10^9 A_t$	$< 0.384 \quad (-0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.20}$	$D_{810}$	$2533^{+28}_{-27} \quad (-0.3\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.316 \quad (-0.0\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{1420}$	$814^{+10}_{-10} \quad (+0.0\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24635^{+0.00023}_{-0.00022} \quad (-3.3\sigma)$
$A^{\text{kSZ}}$	—	$n_{\text{s},0.002}$	$1.009^{+0.061}_{-0.060} \quad (-0.0\sigma)$	$f_{2000}^{143}$	$30^{+6}_{-6} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$Y_{\text{P}}$	$0.24503^{+0.00023}_{-0.00021} \quad (-3.4\sigma)$	$f_{2000}^{217}$	$106.8^{+4.2}_{-4.3} \quad (+0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$\text{Age/Gyr}$	$13.772^{+0.081}_{-0.086} \quad (-0.0\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-5} \quad (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$z_*$	$1089.62^{+0.90}_{-0.92} \quad (-0.1\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.8 \quad (\nu: 4.7) \quad (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$r_*$	$144.75^{+0.95}_{-0.93} \quad (+0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.3 \quad (\nu: 18.9)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$100\theta_*$	$1.04130^{+0.00093}_{-0.00093} \quad (+0.1\sigma)$	$\chi_{\text{H070p6}}^2$	$0.66 \quad (\nu: 0.1) \quad (-0.1\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0034} \quad (+0.9\sigma)$	$z_{\text{drag}}$	$1060.1^{+1.1}_{-1.1} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.2) \quad (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$r_{\text{drag}}$	$147.38^{+0.96}_{-0.93} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18558.1 \quad (\nu: 19.0) \quad (+1124.1\sigma)$
$H_0$	$68.1^{+2.0}_{-1.9} \quad (+0.1\sigma)$	$k_D$	$0.1407^{+0.0011}_{-0.0011} \quad (-0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18567.12; \Delta\chi_{\text{eff}}^2 = 7282.52; R - 1 = 0.00832$$

18.15 base\_nrun\_r\_CamSpecHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00055}_{-0.00051} \quad (+0.0\sigma)$	$\Omega_\Lambda$	$0.691^{+0.026}_{-0.027} \quad (+0.1\sigma)$	$100\theta_D$	$0.16069^{+0.00061}_{-0.00062} \quad (-0.0\sigma)$
$\Omega_c h^2$	$0.1189^{+0.0043}_{-0.0043} \quad (-0.1\sigma)$	$\Omega_m$	$0.309^{+0.027}_{-0.026} \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3377^{+96}_{-97} \quad (-0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04105^{+0.00096}_{-0.00096} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1420^{+0.0040}_{-0.0040} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.818^{+0.019}_{-0.018} \quad (+0.1\sigma)$
$\tau$	$0.091^{+0.043}_{-0.042} \quad (+0.0\sigma)$	$\Omega_m h^3$	$0.0963^{+0.0010}_{-0.0010} \quad (-0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0717^{+0.0016}_{-0.0015} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.115^{+0.086}_{-0.083} \quad (-0.0\sigma)$	$\sigma_8$	$0.835^{+0.032}_{-0.031} \quad (-0.0\sigma)$	$H(0.57)$	$93.19^{+0.94}_{-0.92} \quad (+0.1\sigma)$
$n_s$	$0.969^{+0.013}_{-0.012} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.464^{+0.026}_{-0.026} \quad (-0.1\sigma)$	$D_A(0.57)$	$1384^{+27}_{-28} \quad (-0.1\sigma)$
$dn_s/d \ln k$	$-0.012^{+0.017}_{-0.018} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.622^{+0.027}_{-0.026} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6753^{+0.0068}_{-0.0068} \quad (-0.1\sigma)$
$r$	$< 0.165 \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$1.014^{+0.041}_{-0.038} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.485^{+0.020}_{-0.019} \quad (-0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0048} \quad (-0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.485^{+0.092}_{-0.089} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.622^{+0.025}_{-0.024} \quad (+0.0\sigma)$
$A_{100}^{\text{PS}}$	$248^{+40}_{-50} \quad (-0.5\sigma)$	$z_{\text{re}}$	$11.0^{+3.5}_{-3.5} \quad (+0.0\sigma)$	$r_{0.002}$	$< 0.177 \quad (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$10^9 A_s$	$2.25^{+0.19}_{-0.19} \quad (-0.0\sigma)$	$r_{0.01}$	$< 0.167 \quad (-0.0\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.028}_{-0.028} \quad (-0.4\sigma)$	$\ln(10^{10} A_t)$	$-0.2^{+2.0}_{-2.5} \quad (-0.0\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$D_{40}$	$1224^{+46}_{-45} \quad (-0.3\sigma)$	$r_{10}$	$< 0.0912 \quad (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.45 \quad (-0.9\sigma)$	$D_{220}$	$5697^{+83}_{-81} \quad (-0.5\sigma)$	$10^9 A_t$	$< 0.375 \quad (-0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.20}$	$D_{810}$	$2533^{+28}_{-27} \quad (-0.3\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.309 \quad (-0.0\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{1420}$	$814^{+10}_{-10} \quad (-0.0\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24634^{+0.00023}_{-0.00022} \quad (-3.3\sigma)$
$A^{\text{kSZ}}$	—	$n_{\text{s},0.002}$	$1.007^{+0.060}_{-0.059} \quad (-0.0\sigma)$	$f_{2000}^{143}$	$30^{+6}_{-6} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$Y_{\text{P}}$	$0.24501^{+0.00023}_{-0.00021} \quad (-3.3\sigma)$	$f_{2000}^{217}$	$106.9^{+4.2}_{-4.3} \quad (+0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$\text{Age/Gyr}$	$13.781^{+0.082}_{-0.089} \quad (-0.1\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+5}_{-5} \quad (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$z_*$	$1089.71^{+0.91}_{-0.94} \quad (-0.1\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.7 (\nu: 4.5) \quad (-0.1\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$r_*$	$144.66^{+0.97}_{-0.94} \quad (+0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.2 (\nu: 18.6)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$100\theta_*$	$1.04124^{+0.00094}_{-0.00093} \quad (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.4 (\nu: 6.2) \quad (+0.3\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0034} \quad (+0.9\sigma)$	$z_{\text{drag}}$	$1060.0^{+1.1}_{-1.1} \quad (-0.0\sigma)$	$\chi_{\text{CMB}}^2$	$18557.9 (\nu: 18.7) \quad (+930.0\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$r_{\text{drag}}$	$147.30^{+0.97}_{-0.94} \quad (+0.1\sigma)$		
$H_0$	$67.9^{+2.1}_{-2.0} \quad (+0.1\sigma)$	$k_D$	$0.1407^{+0.0011}_{-0.0011} \quad (-0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18566.29; \Delta\chi_{\text{eff}}^2 = 7282.53; R - 1 = 0.00830$$



# 18.16 base\_nrun\_r\_CamSpecHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022390	$0.02243^{+0.00034}_{-0.00034}$ (+0.7 $\sigma$ )	$\beta_1^1$	-0.13	$-0.1^{+2.0}_{-2.0}$	$r_{\text{drag}}$	147.31	$147.32^{+0.62}_{-0.64}$ (+0.3 $\sigma$ )
$\Omega_c h^2$	0.11908	$0.1189^{+0.0029}_{-0.0028}$ (-0.5 $\sigma$ )	$H_0$	67.67	$67.8^{+1.3}_{-1.3}$ (+0.6 $\sigma$ )	$k_D$	0.14066	$0.14068^{+0.00073}_{-0.00070}$ (+0.0 $\sigma$ )
$100\theta_{\text{MC}}$	1.04085	$1.04086^{+0.00059}_{-0.00062}$ (+0.2 $\sigma$ )	$\Omega_\Lambda$	0.6896	$0.691^{+0.017}_{-0.018}$ (+0.6 $\sigma$ )	$100\theta_D$	0.160730	$0.16069^{+0.00040}_{-0.00040}$ (-0.7 $\sigma$ )
$\tau$	0.0803	$0.082^{+0.036}_{-0.034}$ (-0.1 $\sigma$ )	$\Omega_m$	0.3104	$0.309^{+0.018}_{-0.017}$ (-0.6 $\sigma$ )	$z_{\text{eq}}$	3381	$3377^{+64}_{-63}$ (-0.5 $\sigma$ )
$\ln(10^{10} A_s)$	3.092	$3.095^{+0.071}_{-0.069}$ (-0.2 $\sigma$ )	$\Omega_m h^2$	0.14211	$0.1420^{+0.0027}_{-0.0026}$ (-0.5 $\sigma$ )	$100\theta_{\text{eq}}$	0.8172	$0.818^{+0.012}_{-0.012}$ (+0.5 $\sigma$ )
$n_s$	0.9673	$0.9686^{+0.0097}_{-0.0098}$ (+0.9 $\sigma$ )	$\Omega_m h^3$	0.09617	$0.09621^{+0.00064}_{-0.00063}$ (+0.3 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07162	$0.07170^{+0.00097}_{-0.00096}$ (+0.5 $\sigma$ )
$dn_s/d \ln k$	-0.0054	$-0.008^{+0.015}_{-0.016}$ (+0.1 $\sigma$ )	$\sigma_8$	0.8273	$0.828^{+0.027}_{-0.027}$ (-0.4 $\sigma$ )	$H(0.57)$	93.06	$93.12^{+0.57}_{-0.55}$ (+0.6 $\sigma$ )
$r$	0.029	< 0.202 (+0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4609	$0.460^{+0.019}_{-0.019}$ (-0.7 $\sigma$ )	$D_A(0.57)$	1386.6	$1385^{+17}_{-17}$ (-0.6 $\sigma$ )
$y_{\text{cal}}$	1.00038	$1.0003^{+0.0049}_{-0.0049}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6175	$0.617^{+0.021}_{-0.022}$ (-0.6 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.67574	$0.6754^{+0.0044}_{-0.0043}$ (-0.6 $\sigma$ )
$A_{100}^{\text{PS}}$	250.1	$247^{+40}_{-50}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0057	$1.005^{+0.033}_{-0.033}$ (-0.5 $\sigma$ )	$f\sigma_8(0.57)$	0.4807	$0.480^{+0.016}_{-0.016}$ (-0.5 $\sigma$ )
$A_{143}^{\text{PS}}$	35.9	$40^{+20}_{-20}$ (-0.7 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.478	$2.471^{+0.078}_{-0.080}$ (-0.7 $\sigma$ )	$\sigma_8(0.57)$	0.6157	$0.616^{+0.021}_{-0.020}$ (-0.2 $\sigma$ )
$A_{217}^{\text{PS}}$	96.6	$98^{+30}_{-30}$ (+0.1 $\sigma$ )	$z_{\text{re}}$	10.13	$10.2^{+3.0}_{-3.2}$ (-0.1 $\sigma$ )	$r_{0.002}$	0.027	< 0.216 (+0.6 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.1	$46^{+10}_{-10}$ (-2.8 $\sigma$ )	$10^9 A_s$	2.203	$2.21^{+0.16}_{-0.16}$ (-0.2 $\sigma$ )	$r_{0.01}$	0.028	< 0.205 (+0.6 $\sigma$ )
$A_{143}^{\text{tSZ}}$	3.16	< 6.63 (-0.9 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.8762	$1.876^{+0.024}_{-0.024}$ (-0.7 $\sigma$ )	$\ln(10^{10} A_t)$	-0.45	$0.2^{+1.7}_{-2.2}$ (+0.4 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.411	$0.51^{+0.22}_{-0.20}$	$D_{40}$	1227.3	$1239^{+44}_{-42}$ (-0.1 $\sigma$ )	$r_{10}$	0.014	< 0.112 (+0.6 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{220}$	5710	$5703^{+77}_{-77}$ (-0.5 $\sigma$ )	$10^9 A_t$	0.064	< 0.449 (+0.6 $\sigma$ )
$A^{\text{kSZ}}$	5.3	—	$D_{810}$	2531.8	$2532^{+27}_{-27}$ (-0.4 $\sigma$ )	$10^9 A_t e^{-2\tau}$	0.054	< 0.380 (+0.6 $\sigma$ )
$A_{100}^{\text{dust}}$	0.994	$0.98^{+0.38}_{-0.38}$	$D_{1420}$	813.8	$814^{+10}_{-9.7}$ (+0.1 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246312	$0.24633^{+0.00014}_{-0.00015}$ (-4.9 $\sigma$ )
$A_{143}^{\text{dust}}$	1.009	$1.02^{+0.36}_{-0.36}$	$n_{s,0.002}$	0.985	$0.994^{+0.051}_{-0.049}$ (+0.1 $\sigma$ )	$f_{2000}^{143}$	29.5	$29^{+6}_{-6}$ (-0.5 $\sigma$ )
$A_{217}^{\text{dust}}$	1.224	$1.21^{+0.23}_{-0.23}$	$Y_{\text{P}}$	0.244980	$0.24500^{+0.00015}_{-0.00014}$ (-4.9 $\sigma$ )	$f_{2000}^{217}$	106.88	$106.6^{+4.1}_{-4.1}$ (-0.0 $\sigma$ )
$A_{143 \times 217}^{\text{dust}}$	0.968	$0.99^{+0.35}_{-0.35}$	Age/Gyr	13.794	$13.788^{+0.052}_{-0.052}$ (-0.6 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.91	$32^{+4}_{-4}$ (-0.6 $\sigma$ )
$c_{100}$	0.99678	$0.9968^{+0.0019}_{-0.0019}$ (-1.8 $\sigma$ )	$z_*$	1089.80	$1089.73^{+0.59}_{-0.59}$ (-0.7 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10495.2	$10497.4 (\nu: 4.3)$ (-0.0 $\sigma$ )
$c_{217}$	0.99734	$0.9971^{+0.0034}_{-0.0034}$ (+0.7 $\sigma$ )	$r_*$	144.66	$144.68^{+0.63}_{-0.63}$ (+0.4 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	12936.3	$12952.8 (\nu: 20.6)$
$c_{\text{TE}}$	1.0033	$1.0036^{+0.0090}_{-0.0088}$	$100\theta_*$	1.04104	$1.04105^{+0.00057}_{-0.00060}$ (+0.2 $\sigma$ )	$\chi_{\text{prior}}^2$	3.6	$8.8 (\nu: 6.3)$ (-1.9 $\sigma$ )
$c_{\text{EE}}$	1.0008	$1.0007^{+0.0083}_{-0.0083}$	$z_{\text{drag}}$	1059.89	$1059.98^{+0.68}_{-0.70}$ (+0.6 $\sigma$ )	$\chi_{\text{CMB}}^2$	23431.5	$23450.3 (\nu: 19.9)$ (+1506.9 $\sigma$ )

Best-fit  $\chi_{\text{eff}}^2 = 23435.05$ ;  $\Delta\chi_{\text{eff}}^2 = 10499.87$ ;  $\bar{\chi}_{\text{eff}}^2 = 23459.10$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 10489.59$ ;  $R - 1 = 0.00444$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.23 ( $\Delta$  -0.56) CamSpec like\_v9.10CMH\_unified: 12936.26

### 18.17 base\_nrun\_r\_CamSpecHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02244^{+0.00031}_{-0.00030} \quad (+0.6\sigma)$	$\Omega_\Lambda$	$0.692^{+0.012}_{-0.013} \quad (+0.4\sigma)$	$100\theta_{\text{eq}}$	$0.8185^{+0.0089}_{-0.0088} \quad (+0.3\sigma)$
$\Omega_c h^2$	$0.1188^{+0.0021}_{-0.0020} \quad (-0.4\sigma)$	$\Omega_m$	$0.308^{+0.013}_{-0.012} \quad (-0.4\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07174^{+0.00069}_{-0.00070} \quad (+0.4\sigma)$
$100\theta_{\text{MC}}$	$1.04088^{+0.00055}_{-0.00056} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1418^{+0.0020}_{-0.0019} \quad (-0.3\sigma)$	$H(0.57)$	$93.14^{+0.44}_{-0.43} \quad (+0.5\sigma)$
$\tau$	$0.082^{+0.034}_{-0.034} \quad (-0.2\sigma)$	$\Omega_m h^3$	$0.09621^{+0.00064}_{-0.00063} \quad (+0.3\sigma)$	$D_A(0.57)$	$1384^{+13}_{-13} \quad (-0.5\sigma)$
$\ln(10^{10} A_s)$	$3.096^{+0.069}_{-0.067} \quad (-0.3\sigma)$	$\sigma_8$	$0.828^{+0.027}_{-0.027} \quad (-0.4\sigma)$	$F_{\text{AP}}(0.57)$	$0.6752^{+0.0032}_{-0.0031} \quad (-0.4\sigma)$
$n_s$	$0.9690^{+0.0083}_{-0.0085} \quad (+0.8\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.018}_{-0.017} \quad (-0.6\sigma)$	$f\sigma_8(0.57)$	$0.480^{+0.016}_{-0.016} \quad (-0.5\sigma)$
$dn_s/d \ln k$	$-0.008^{+0.016}_{-0.016} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.617^{+0.021}_{-0.021} \quad (-0.5\sigma)$	$\sigma_8(0.57)$	$0.616^{+0.021}_{-0.020} \quad (-0.3\sigma)$
$r$	$< 0.202 \quad (+0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.005^{+0.033}_{-0.033} \quad (-0.5\sigma)$	$r_{0.002}$	$< 0.215 \quad (+0.6\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0049} \quad (-0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.470^{+0.078}_{-0.080} \quad (-0.6\sigma)$	$r_{0.01}$	$< 0.204 \quad (+0.6\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-50} \quad (-0.6\sigma)$	$z_{\text{re}}$	$10.2^{+2.9}_{-3.1} \quad (-0.2\sigma)$	$\ln(10^{10} A_t)$	$0.2^{+1.7}_{-2.2} \quad (+0.4\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$10^9 A_s$	$2.21^{+0.16}_{-0.15} \quad (-0.3\sigma)$	$r_{10}$	$< 0.112 \quad (+0.6\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.023}_{-0.022} \quad (-0.7\sigma)$	$10^9 A_t$	$< 0.446 \quad (+0.6\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$D_{40}$	$1239^{+44}_{-42} \quad (-0.1\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.378 \quad (+0.6\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.62 \quad (-1.0\sigma)$	$D_{220}$	$5704^{+76}_{-77} \quad (-0.6\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24633^{+0.00013}_{-0.00013} \quad (-5.6\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{810}$	$2532^{+27}_{-26} \quad (-0.4\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{1420}$	$814.0^{+9.9}_{-9.6} \quad (+0.1\sigma)$	$f_{2000}^{217}$	$106.6^{+4.1}_{-4.1} \quad (+0.0\sigma)$
$A^{\text{kSZ}}$	—	$n_{\text{s},0.002}$	$0.994^{+0.051}_{-0.049} \quad (+0.1\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.37}_{-0.37}$	$Y_{\text{P}}$	$0.24500^{+0.00014}_{-0.00013} \quad (-5.7\sigma)$	$\chi_{\text{lowTEB}}^2$	$10497.4 \quad (\nu: 4.3) \quad (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$\text{Age/Gyr}$	$13.787^{+0.044}_{-0.044} \quad (-0.5\sigma)$	$\chi_{\text{CamSpec}}^2$	$12952.4 \quad (\nu: 19.9)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$z_*$	$1089.71^{+0.48}_{-0.49} \quad (-0.6\sigma)$	$\chi_{6\text{DF}}^2$	$0.040 \quad (\nu: 0.0) \quad (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.35}$	$r_*$	$144.70^{+0.48}_{-0.50} \quad (+0.2\sigma)$	$\chi_{\text{MGS}}^2$	$1.44 \quad (\nu: 0.1) \quad (+0.4\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$100\theta_*$	$1.04106^{+0.00055}_{-0.00055} \quad (+0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.74 \quad (\nu: 0.1) \quad (-0.2\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0034} \quad (+0.7\sigma)$	$z_{\text{drag}}$	$1059.99^{+0.69}_{-0.65} \quad (+0.5\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.60 \quad (\nu: 0.1) \quad (-0.4\sigma)$
$c_{\text{TE}}$	$1.0036^{+0.0090}_{-0.0088}$	$r_{\text{drag}}$	$147.35^{+0.52}_{-0.53} \quad (+0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.8 \quad (\nu: 6.1) \quad (-1.9\sigma)$
$c_{\text{EE}}$	$1.0007^{+0.0085}_{-0.0083}$	$k_{\text{D}}$	$0.14066^{+0.00067}_{-0.00064} \quad (+0.2\sigma)$	$\chi_{\text{CMB}}^2$	$23449.8 \quad (\nu: 19.2) \quad (+1513.2\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$100\theta_{\text{D}}$	$0.16068^{+0.00038}_{-0.00040} \quad (-0.6\sigma)$	$\chi_{\text{BAO}}^2$	$4.82 \quad (\nu: 0.2) \quad (-0.2\sigma)$
$H_0$	$67.84^{+0.94}_{-0.93} \quad (+0.4\sigma)$	$z_{\text{eq}}$	$3374^{+47}_{-46} \quad (-0.3\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 23463.43; \Delta\bar{\chi}_{\text{eff}}^2 = 10489.34; R - 1 = 0.00588$$

18.18 base\_nrun\_r\_CamSpecHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02244^{+0.00034}_{-0.00033} \quad (+0.7\sigma)$	$H_0$	$67.9^{+1.3}_{-1.2} \quad (+0.6\sigma)$	$100\theta_D$	$0.16068^{+0.00039}_{-0.00041} \quad (-0.7\sigma)$
$\Omega_c h^2$	$0.1187^{+0.0027}_{-0.0027} \quad (-0.5\sigma)$	$\Omega_\Lambda$	$0.692^{+0.016}_{-0.017} \quad (+0.5\sigma)$	$z_{\text{eq}}$	$3373^{+62}_{-62} \quad (-0.5\sigma)$
$100\theta_{\text{MC}}$	$1.04088^{+0.00058}_{-0.00060} \quad (+0.2\sigma)$	$\Omega_m$	$0.308^{+0.017}_{-0.016} \quad (-0.5\sigma)$	$100\theta_{\text{eq}}$	$0.819^{+0.012}_{-0.012} \quad (+0.5\sigma)$
$\tau$	$0.083^{+0.036}_{-0.034} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1418^{+0.0026}_{-0.0026} \quad (-0.5\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07175^{+0.00095}_{-0.00092} \quad (+0.5\sigma)$
$\ln(10^{10} A_s)$	$3.097^{+0.072}_{-0.068} \quad (-0.3\sigma)$	$\Omega_m h^3$	$0.09622^{+0.00064}_{-0.00063} \quad (+0.3\sigma)$	$H(0.57)$	$93.15^{+0.56}_{-0.54} \quad (+0.6\sigma)$
$n_s$	$0.9690^{+0.0095}_{-0.0096} \quad (+0.9\sigma)$	$\sigma_8$	$0.828^{+0.027}_{-0.027} \quad (-0.4\sigma)$	$D_A(0.57)$	$1384^{+16}_{-17} \quad (-0.6\sigma)$
$dn_s/d \ln k$	$-0.008^{+0.016}_{-0.016} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.019}_{-0.019} \quad (-0.6\sigma)$	$F_{\text{AP}}(0.57)$	$0.6752^{+0.0042}_{-0.0042} \quad (-0.5\sigma)$
$r$	$< 0.204 \quad (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.617^{+0.022}_{-0.022} \quad (-0.6\sigma)$	$f\sigma_8(0.57)$	$0.480^{+0.016}_{-0.016} \quad (-0.5\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$1.005^{+0.033}_{-0.034} \quad (-0.5\sigma)$	$\sigma_8(0.57)$	$0.617^{+0.021}_{-0.020} \quad (-0.3\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-50} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.470^{+0.078}_{-0.081} \quad (-0.7\sigma)$	$r_{0.002}$	$< 0.217 \quad (+0.6\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.7\sigma)$	$z_{\text{re}}$	$10.3^{+3.0}_{-3.2} \quad (-0.2\sigma)$	$r_{0.01}$	$< 0.207 \quad (+0.6\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s$	$2.21^{+0.16}_{-0.16} \quad (-0.2\sigma)$	$\ln(10^{10} A_t)$	$0.2^{+1.7}_{-2.2} \quad (+0.4\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.024}_{-0.023} \quad (-0.7\sigma)$	$r_{10}$	$< 0.113 \quad (+0.6\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.64 \quad (-0.9\sigma)$	$D_{40}$	$1238^{+45}_{-40} \quad (-0.1\sigma)$	$10^9 A_t$	$< 0.451 \quad (+0.6\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{220}$	$5704^{+77}_{-77} \quad (-0.5\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.382 \quad (+0.6\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2532^{+27}_{-26} \quad (-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24633^{+0.00014}_{-0.00014} \quad (-5.0\sigma)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$814^{+10}_{-9.7} \quad (+0.1\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.37}_{-0.37}$	$n_{\text{s},0.002}$	$0.995^{+0.052}_{-0.049} \quad (+0.1\sigma)$	$f_{2000}^{217}$	$106.6^{+4.1}_{-4.1} \quad (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$Y_{\text{P}}$	$0.24501^{+0.00015}_{-0.00014} \quad (-5.0\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.6\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$\text{Age}/\text{Gyr}$	$13.786^{+0.051}_{-0.051} \quad (-0.6\sigma)$	$\chi_{\text{lowTEB}}^2$	$10497.4 \quad (\nu: 4.4) \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.35}$	$z_*$	$1089.70^{+0.58}_{-0.58} \quad (-0.7\sigma)$	$\chi_{\text{CamSpec}}^2$	$12952.8 \quad (\nu: 20.6)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$r_*$	$144.71^{+0.62}_{-0.62} \quad (+0.3\sigma)$	$\chi_{\text{JLA}}^2$	$706.72 \quad (\nu: 0.0) \quad (-0.5\sigma)$
$c_{217}$	$0.9971^{+0.0034}_{-0.0034} \quad (+0.7\sigma)$	$100\theta_*$	$1.04107^{+0.00056}_{-0.00059} \quad (+0.2\sigma)$	$\chi_{\text{prior}}^2$	$8.8 \quad (\nu: 6.2) \quad (-1.9\sigma)$
$c_{\text{TE}}$	$1.0036^{+0.0090}_{-0.0088}$	$z_{\text{drag}}$	$1060.00^{+0.70}_{-0.66} \quad (+0.6\sigma)$	$\chi_{\text{CMB}}^2$	$23450.2 \quad (\nu: 20.0) \quad (+1498.0\sigma)$
$c_{\text{EE}}$	$1.0007^{+0.0085}_{-0.0083}$	$r_{\text{drag}}$	$147.35^{+0.61}_{-0.62} \quad (+0.2\sigma)$		
$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$k_{\text{D}}$	$0.14067^{+0.00071}_{-0.00069} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 24165.77; \Delta\bar{\chi}_{\text{eff}}^2 = 10489.48; R - 1 = 0.00569$$

### 18.19 base\_nrun\_r\_CamSpecHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02245^{+0.00034}_{-0.00033} \quad (+0.7\sigma)$	$H_0$	$67.9^{+1.3}_{-1.2} \quad (+0.6\sigma)$	$100\theta_D$	$0.16067^{+0.00039}_{-0.00041} \quad (-0.7\sigma)$
$\Omega_c h^2$	$0.1187^{+0.0028}_{-0.0028} \quad (-0.5\sigma)$	$\Omega_\Lambda$	$0.692^{+0.017}_{-0.017} \quad (+0.5\sigma)$	$z_{\text{eq}}$	$3372^{+63}_{-63} \quad (-0.5\sigma)$
$100\theta_{\text{MC}}$	$1.04089^{+0.00058}_{-0.00060} \quad (+0.2\sigma)$	$\Omega_m$	$0.308^{+0.017}_{-0.017} \quad (-0.5\sigma)$	$100\theta_{\text{eq}}$	$0.819^{+0.012}_{-0.012} \quad (+0.5\sigma)$
$\tau$	$0.083^{+0.036}_{-0.034} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1418^{+0.0026}_{-0.0026} \quad (-0.5\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07177^{+0.00097}_{-0.00093} \quad (+0.5\sigma)$
$\ln(10^{10} A_s)$	$3.097^{+0.072}_{-0.068} \quad (-0.2\sigma)$	$\Omega_m h^3$	$0.09622^{+0.00064}_{-0.00063} \quad (+0.3\sigma)$	$H(0.57)$	$93.16^{+0.57}_{-0.54} \quad (+0.6\sigma)$
$n_s$	$0.9692^{+0.0096}_{-0.0097} \quad (+0.9\sigma)$	$\sigma_8$	$0.828^{+0.027}_{-0.027} \quad (-0.4\sigma)$	$D_A(0.57)$	$1384^{+17}_{-17} \quad (-0.6\sigma)$
$dn_s/d \ln k$	$-0.008^{+0.016}_{-0.016} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.019}_{-0.019} \quad (-0.6\sigma)$	$F_{\text{AP}}(0.57)$	$0.6751^{+0.0043}_{-0.0043} \quad (-0.5\sigma)$
$r$	$< 0.205 \quad (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.616^{+0.022}_{-0.022} \quad (-0.6\sigma)$	$f\sigma_8(0.57)$	$0.480^{+0.016}_{-0.016} \quad (-0.5\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0050}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$1.005^{+0.033}_{-0.034} \quad (-0.5\sigma)$	$\sigma_8(0.57)$	$0.617^{+0.021}_{-0.020} \quad (-0.3\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-50} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.470^{+0.078}_{-0.081} \quad (-0.7\sigma)$	$r_{0.002}$	$< 0.220 \quad (+0.6\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.7\sigma)$	$z_{\text{re}}$	$10.3^{+3.0}_{-3.2} \quad (-0.1\sigma)$	$r_{0.01}$	$< 0.208 \quad (+0.6\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s$	$2.22^{+0.16}_{-0.16} \quad (-0.2\sigma)$	$\ln(10^{10} A_t)$	$0.3^{+1.7}_{-2.2} \quad (+0.4\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.024}_{-0.023} \quad (-0.7\sigma)$	$r_{10}$	$< 0.114 \quad (+0.6\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.65 \quad (-0.9\sigma)$	$D_{40}$	$1238^{+45}_{-40} \quad (-0.1\sigma)$	$10^9 A_t$	$< 0.455 \quad (+0.6\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{220}$	$5705^{+76}_{-77} \quad (-0.5\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.384 \quad (+0.6\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2532^{+27}_{-26} \quad (-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24634^{+0.00014}_{-0.00014} \quad (-4.9\sigma)$
$A^{\text{kSZ}}$	—	$D_{1420}$	$814^{+10}_{-9.8} \quad (+0.1\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.37}_{-0.37}$	$n_{\text{s},0.002}$	$0.995^{+0.052}_{-0.049} \quad (+0.1\sigma)$	$f_{2000}^{217}$	$106.6^{+4.1}_{-4.1} \quad (-0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$Y_{\text{P}}$	$0.24501^{+0.00015}_{-0.00014} \quad (-5.0\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.6\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$\text{Age}/\text{Gyr}$	$13.784^{+0.051}_{-0.052} \quad (-0.6\sigma)$	$\chi_{\text{lowTEB}}^2$	$10497.5 \quad (\nu: 4.4) \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.35}$	$z_*$	$1089.69^{+0.58}_{-0.58} \quad (-0.7\sigma)$	$\chi_{\text{CamSpec}}^2$	$12952.9 \quad (\nu: 20.6)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$r_*$	$144.72^{+0.62}_{-0.63} \quad (+0.3\sigma)$	$\chi_{\text{H070p6}}^2$	$0.70 \quad (\nu: 0.0) \quad (-0.5\sigma)$
$c_{217}$	$0.9971^{+0.0034}_{-0.0034} \quad (+0.7\sigma)$	$100\theta_*$	$1.04107^{+0.00057}_{-0.00059} \quad (+0.2\sigma)$	$\chi_{\text{prior}}^2$	$8.8 \quad (\nu: 6.2) \quad (-1.9\sigma)$
$c_{\text{TE}}$	$1.0036^{+0.0091}_{-0.0088}$	$z_{\text{drag}}$	$1060.01^{+0.72}_{-0.67} \quad (+0.6\sigma)$	$\chi_{\text{CMB}}^2$	$23450.3 \quad (\nu: 20.1) \quad (+1493.4\sigma)$
$c_{\text{EE}}$	$1.0007^{+0.0084}_{-0.0083}$	$r_{\text{drag}}$	$147.36^{+0.62}_{-0.63} \quad (+0.2\sigma)$		
$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$k_{\text{D}}$	$0.14066^{+0.00072}_{-0.00069} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 23459.82; \Delta\bar{\chi}_{\text{eff}}^2 = 10489.43; R - 1 = 0.00607$$

## 18.20 base\_nrun\_r\_CamSpecHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02243^{+0.00034}_{-0.00033} \quad (+0.7\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$r_{\text{drag}}$	$147.32^{+0.62}_{-0.64} \quad (+0.3\sigma)$
$\Omega_c h^2$	$0.1189^{+0.0028}_{-0.0028} \quad (-0.5\sigma)$	$H_0$	$67.8^{+1.3}_{-1.3} \quad (+0.6\sigma)$	$k_D$	$0.14069^{+0.00071}_{-0.00070} \quad (+0.0\sigma)$
$100\theta_{\text{MC}}$	$1.04086^{+0.00058}_{-0.00061} \quad (+0.2\sigma)$	$\Omega_\Lambda$	$0.691^{+0.017}_{-0.017} \quad (+0.6\sigma)$	$100\theta_D$	$0.16068^{+0.00039}_{-0.00041} \quad (-0.7\sigma)$
$\tau$	$0.082^{+0.033}_{-0.035} \quad (-0.1\sigma)$	$\Omega_m$	$0.309^{+0.017}_{-0.017} \quad (-0.6\sigma)$	$z_{\text{eq}}$	$3376^{+63}_{-63} \quad (-0.5\sigma)$
$\ln(10^{10} A_s)$	$3.096^{+0.068}_{-0.069} \quad (-0.2\sigma)$	$\Omega_m h^2$	$0.1419^{+0.0026}_{-0.0026} \quad (-0.5\sigma)$	$100\theta_{\text{eq}}$	$0.818^{+0.012}_{-0.012} \quad (+0.5\sigma)$
$n_s$	$0.9687^{+0.0096}_{-0.0097} \quad (+0.9\sigma)$	$\Omega_m h^3$	$0.09622^{+0.00064}_{-0.00063} \quad (+0.3\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07170^{+0.00097}_{-0.00095} \quad (+0.5\sigma)$
$dn_s/d \ln k$	$-0.008^{+0.016}_{-0.016} \quad (+0.1\sigma)$	$\sigma_8$	$0.828^{+0.026}_{-0.027} \quad (-0.4\sigma)$	$H(0.57)$	$93.12^{+0.57}_{-0.54} \quad (+0.6\sigma)$
$r$	$< 0.203 \quad (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.019}_{-0.019} \quad (-0.7\sigma)$	$D_A(0.57)$	$1385^{+17}_{-17} \quad (-0.6\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.617^{+0.021}_{-0.021} \quad (-0.6\sigma)$	$F_{\text{AP}}(0.57)$	$0.6754^{+0.0044}_{-0.0043} \quad (-0.6\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-50} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.006^{+0.033}_{-0.032} \quad (-0.5\sigma)$	$f\sigma_8(0.57)$	$0.481^{+0.016}_{-0.015} \quad (-0.5\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.472^{+0.077}_{-0.077} \quad (-0.7\sigma)$	$\sigma_8(0.57)$	$0.617^{+0.020}_{-0.020} \quad (-0.2\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$10.3^{+3.0}_{-3.0} \quad (-0.1\sigma)$	$r_{0.002}$	$< 0.216 \quad (+0.6\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.21^{+0.15}_{-0.15} \quad (-0.2\sigma)$	$r_{0.01}$	$< 0.205 \quad (+0.6\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.63 \quad (-0.9\sigma)$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.024}_{-0.024} \quad (-0.7\sigma)$	$\ln(10^{10} A_t)$	$0.2^{+1.8}_{-2.2} \quad (+0.4\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.21}$	$D_{40}$	$1239^{+45}_{-40} \quad (-0.1\sigma)$	$r_{10}$	$< 0.112 \quad (+0.6\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5703^{+77}_{-77} \quad (-0.5\sigma)$	$10^9 A_t$	$< 0.449 \quad (+0.6\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2532^{+27}_{-26} \quad (-0.4\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.381 \quad (+0.6\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.37}_{-0.37}$	$D_{1420}$	$814^{+10}_{-9.7} \quad (+0.1\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24633^{+0.00014}_{-0.00014} \quad (-4.9\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$n_{s,0.002}$	$0.995^{+0.052}_{-0.049} \quad (+0.1\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.5\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.24500^{+0.00015}_{-0.00014} \quad (-4.9\sigma)$	$f_{2000}^{217}$	$106.6^{+4.1}_{-4.1} \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.35}$	$\text{Age/Gyr}$	$13.788^{+0.052}_{-0.052} \quad (-0.6\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.6\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.72^{+0.59}_{-0.59} \quad (-0.8\sigma)$	$\chi_{\text{lowTEB}}^2$	$10497.4 \quad (\nu: 4.3) \quad (-0.0\sigma)$
$c_{217}$	$0.9971^{+0.0034}_{-0.0034} \quad (+0.7\sigma)$	$r_*$	$144.68^{+0.63}_{-0.63} \quad (+0.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$12952.8 \quad (\nu: 20.5)$
$c_{\text{TE}}$	$1.0036^{+0.0091}_{-0.0088}$	$100\theta_*$	$1.04105^{+0.00057}_{-0.00060} \quad (+0.2\sigma)$	$\chi_{\text{prior}}^2$	$8.8 \quad (\nu: 6.2) \quad (-1.9\sigma)$
$c_{\text{EE}}$	$1.0007^{+0.0084}_{-0.0083}$	$z_{\text{drag}}$	$1059.99^{+0.71}_{-0.71} \quad (+0.6\sigma)$	$\chi_{\text{CMB}}^2$	$23450.2 \quad (\nu: 19.9) \quad (+1506.7\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 23459.03; \Delta\bar{\chi}_{\text{eff}}^2 = 10489.63; R - 1 = 0.00583$$

## 18.21 base\_nrun\_r\_plikHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02228	$0.02238^{+0.00054}_{-0.00051}$	$\Omega_m h^2$	0.14143	$0.1410^{+0.0039}_{-0.0039}$	$k_D$	0.14028	$0.1403^{+0.0010}_{-0.0010}$
$\Omega_c h^2$	0.11850	$0.1180^{+0.0042}_{-0.0041}$	$\Omega_m h^3$	0.09596	$0.0961^{+0.0010}_{-0.00098}$	$100\theta_D$	0.16094	$0.16084^{+0.00060}_{-0.00060}$
$100\theta_{MC}$	1.04103	$1.04111^{+0.00093}_{-0.00093}$	$\sigma_8$	0.8160	$0.816^{+0.019}_{-0.019}$	$z_{eq}$	3364	$3354^{+93}_{-92}$
$\tau$	0.0677	$0.071^{+0.036}_{-0.035}$	$\sigma_8 \Omega_m^{0.5}$	0.4523	$0.449^{+0.018}_{-0.018}$	$k_{eq}$	0.010268	$0.01024^{+0.00029}_{-0.00028}$
$\ln(10^{10} A_s)$	3.066	$3.073^{+0.067}_{-0.062}$	$\sigma_8 \Omega_m^{0.25}$	0.6075	$0.605^{+0.015}_{-0.015}$	$100\theta_{eq}$	0.8200	$0.822^{+0.018}_{-0.018}$
$n_s$	0.9681	$0.969^{+0.013}_{-0.012}$	$\sigma_8/h^{0.5}$	0.9906	$0.988^{+0.022}_{-0.022}$	$100\theta_{s,eq}$	0.4529	$0.4541^{+0.0093}_{-0.0091}$
$dn_s/d \ln k$	-0.0021	$-0.008^{+0.016}_{-0.017}$	$\langle d^2 \rangle^{1/2}$	2.446	$2.434^{+0.055}_{-0.058}$	$r_{drag}/D_V(0.57)$	0.07183	$0.0720^{+0.0015}_{-0.0014}$
$r$	0.000	$< 0.176$	$z_{re}$	8.99	$9.2^{+3.1}_{-3.4}$	$H(0.57)$	93.08	$93.25^{+0.93}_{-0.85}$
$y_{cal}$	1.00001	$1.0002^{+0.0049}_{-0.0050}$	$10^9 A_s$	2.146	$2.16^{+0.15}_{-0.13}$	$D_A(0.57)$	1384.6	$1380^{+26}_{-26}$
$A_{217}^{CIB}$	68.0	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8742	$1.874^{+0.026}_{-0.026}$	$F_{AP}(0.57)$	0.6749	$0.6740^{+0.0066}_{-0.0064}$
$\xi^{tSZ \times CIB}$	0.00	—	$D_{40}$	1219.5	$1229^{+48}_{-45}$	$f\sigma_8(0.57)$	0.4733	$0.472^{+0.010}_{-0.011}$
$A_{143}^{tSZ}$	7.15	$4.8^{+3.8}_{-3.8}$	$D_{220}$	5713	$5716^{+83}_{-82}$	$\sigma_8(0.57)$	0.6081	$0.609^{+0.018}_{-0.017}$
$A_{100}^{PS}$	256	$263^{+50}_{-50}$	$D_{810}$	2532.7	$2534^{+27}_{-28}$	$r_{0.002}$	0.000	$< 0.186$
$A_{143}^{PS}$	39.9	$45^{+20}_{-20}$	$D_{1420}$	814.5	$814^{+10}_{-10}$	$r_{0.01}$	0.000	$< 0.177$
$A_{143 \times 217}^{PS}$	33	$38^{+20}_{-20}$	$D_{2000}$	229.96	$229.7^{+3.7}_{-3.8}$	$\ln(10^{10} A_t)$	-7.18	$-0.1^{+2.0}_{-2.5}$
$A_{217}^{PS}$	96.8	$95^{+20}_{-20}$	$n_{s,0.002}$	0.975	$0.993^{+0.058}_{-0.053}$	$r_{10}$	0.0000	$< 0.0965$
$A^{kSZ}$	0.0	—	$Y_P$	0.245355	$0.24540^{+0.00024}_{-0.00023}$	$10^9 A_t$	0.000	$< 0.383$
$A_{100}^{dustTT}$	7.46	$7.5^{+3.6}_{-3.7}$	$Y_P^{BBN}$	0.246681	$0.24672^{+0.00024}_{-0.00023}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.330$
$A_{143}^{dustTT}$	9.10	$9.1^{+3.6}_{-3.6}$	$10^5 D/H$	2.608	$2.590^{+0.098}_{-0.10}$	$f_{2000}^{143}$	30.3	$31^{+6}_{-6}$
$A_{143 \times 217}^{dustTT}$	17.8	$17.3^{+8.2}_{-8.2}$	Age/Gyr	13.796	$13.782^{+0.082}_{-0.086}$	$f_{2000}^{143 \times 217}$	32.87	$33^{+4}_{-4}$
$A_{217}^{dustTT}$	82.0	$82^{+10}_{-10}$	$z_*$	1089.90	$1089.73^{+0.91}_{-0.92}$	$f_{2000}^{217}$	106.37	$106.8^{+4.2}_{-4.1}$
$c_{100}$	0.99789	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.88	$144.95^{+0.91}_{-0.91}$	$\chi^2_{lensing}$	9.40	$10.2 (\nu: 1.4)$
$c_{217}$	0.99609	$0.9961^{+0.0028}_{-0.0028}$	$100\theta_*$	1.04123	$1.04130^{+0.00091}_{-0.00091}$	$\chi^2_{lowTEB}$	10494.27	$10496.0 (\nu: 3.3)$
$H_0$	67.85	$68.2^{+2.0}_{-1.9}$	$D_A/Gpc$	13.915	$13.920^{+0.085}_{-0.085}$	$\chi^2_{plik}$	766.5	$781.4 (\nu: 17.6)$
$\Omega_\Lambda$	0.6928	$0.696^{+0.025}_{-0.026}$	$z_{drag}$	1059.63	$1059.8^{+1.1}_{-1.1}$	$\chi^2_{prior}$	2.1	$7.5 (\nu: 6.6)$
$\Omega_m$	0.3072	$0.304^{+0.026}_{-0.025}$	$r_{drag}$	147.58	$147.62^{+0.91}_{-0.90}$	$\chi^2_{CMB}$	11270.2	$11287.6 (\nu: 17.9)$

Best-fit  $\chi^2_{eff} = 11272.35$ ;  $\bar{\chi}^2_{eff} = 11295.06$ ;  $R - 1 = 0.00636$

$\chi^2_{eff}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.40 lowl.SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10494.27 plik\_dx11dr2\_HM\_v18.TT: 766.54

## 18.22 base\_nrun\_r\_plikHM\_TT\_lowTEB\_lensing\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022289	$0.02234^{+0.00045}_{-0.00044}$	$\sigma_8$	0.8154	$0.815^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	0.8197	$0.820^{+0.011}_{-0.010}$
$\Omega_c h^2$	0.11856	$0.1184^{+0.0024}_{-0.0025}$	$\sigma_8 \Omega_m^{0.5}$	0.4521	$0.451^{+0.013}_{-0.013}$	$100\theta_{\text{s,eq}}$	0.4528	$0.4530^{+0.0055}_{-0.0053}$
$100\theta_{\text{MC}}$	1.04105	$1.04105^{+0.00082}_{-0.00081}$	$\sigma_8 \Omega_m^{0.25}$	0.6072	$0.606^{+0.014}_{-0.014}$	$r_{\text{drag}}/D_V(0.57)$	0.07181	$0.07187^{+0.00085}_{-0.00082}$
$\tau$	0.0666	$0.068^{+0.027}_{-0.026}$	$\sigma_8/h^{0.5}$	0.9900	$0.989^{+0.021}_{-0.022}$	$H(0.57)$	93.09	$93.14^{+0.59}_{-0.57}$
$\ln(10^{10} A_s)$	3.064	$3.067^{+0.050}_{-0.050}$	$\langle d^2 \rangle^{1/2}$	2.446	$2.436^{+0.054}_{-0.056}$	$D_A(0.57)$	1384.7	$1383^{+16}_{-16}$
$n_s$	0.9678	$0.9678^{+0.0090}_{-0.0091}$	$z_{\text{re}}$	8.89	$8.9^{+2.4}_{-2.6}$	$F_{\text{AP}}(0.57)$	0.67501	$0.6748^{+0.0038}_{-0.0038}$
$dn_s/d \ln k$	-0.0016	$-0.007^{+0.016}_{-0.017}$	$10^9 A_s$	2.141	$2.15^{+0.11}_{-0.10}$	$f\sigma_8(0.57)$	0.4731	$0.472^{+0.010}_{-0.010}$
$r$	0.000	$< 0.170$	$10^9 A_s e^{-2\tau}$	1.8744	$1.876^{+0.023}_{-0.023}$	$\sigma_8(0.57)$	0.6076	$0.607^{+0.015}_{-0.014}$
$y_{\text{cal}}$	1.00000	$1.0002^{+0.0049}_{-0.0049}$	$D_{40}$	1221.4	$1231^{+47}_{-43}$	$r_{0.002}$	0.000	$< 0.177$
$A_{217}^{\text{CIB}}$	67.5	$65^{+10}_{-10}$	$D_{220}$	5716	$5714^{+80}_{-81}$	$r_{0.01}$	0.000	$< 0.171$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{810}$	2532.8	$2534^{+27}_{-28}$	$\ln(10^{10} A_t)$	-4.98	$-0.2^{+2.0}_{-2.5}$
$A_{143}^{\text{tSZ}}$	7.21	$4.8^{+3.8}_{-3.8}$	$D_{1420}$	814.6	$814^{+10}_{-10}$	$r_{10}$	0.0001	$< 0.0923$
$A_{100}^{\text{PS}}$	255	$263^{+50}_{-50}$	$D_{2000}$	230.01	$229.5^{+3.6}_{-3.6}$	$10^9 A_t$	0.001	$< 0.368$
$A_{143}^{\text{PS}}$	39.9	$45^{+20}_{-20}$	$n_{\text{s},0.002}$	0.973	$0.990^{+0.054}_{-0.051}$	$10^9 A_t e^{-2\tau}$	0.001	$< 0.319$
$A_{143 \times 217}^{\text{PS}}$	33	$38^{+20}_{-20}$	$Y_{\text{P}}$	0.245357	$0.24538^{+0.00020}_{-0.00020}$	$f_{2000}^{143}$	30.3	$31^{+6}_{-6}$
$A_{217}^{\text{PS}}$	97.3	$95^{+20}_{-20}$	$Y_{\text{P}}^{\text{BBN}}$	0.246684	$0.24670^{+0.00020}_{-0.00020}$	$f_{2000}^{143 \times 217}$	32.81	$33^{+4}_{-4}$
$A^{\text{kSZ}}$	0.0	—	$10^5 \text{D}/\text{H}$	2.607	$2.597^{+0.084}_{-0.084}$	$f_{2000}^{217}$	106.31	$106.9^{+4.1}_{-4.0}$
$A_{100}^{\text{dustTT}}$	7.44	$7.5^{+3.6}_{-3.7}$	Age/Gyr	13.796	$13.790^{+0.062}_{-0.063}$	$\chi^2_{\text{lensing}}$	9.31	$10.2 (\nu: 1.4)$
$A_{143}^{\text{dustTT}}$	9.10	$9.1^{+3.6}_{-3.5}$	$z_*$	1089.89	$1089.82^{+0.65}_{-0.66}$	$\chi^2_{\text{lowTEB}}$	10494.45	$10495.9 (\nu: 3.2)$
$A_{143 \times 217}^{\text{dustTT}}$	17.9	$17.3^{+8.0}_{-8.2}$	$r_*$	144.87	$144.86^{+0.63}_{-0.62}$	$\chi^2_{\text{plik}}$	766.6	$780.8 (\nu: 16.8)$
$A_{217}^{\text{dustTT}}$	82.2	$82^{+10}_{-10}$	$100\theta_*$	1.04124	$1.04124^{+0.00080}_{-0.00080}$	$\chi^2_{6\text{DF}}$	0.006	$0.043 (\nu: 0.0)$
$c_{100}$	0.99794	$0.9979^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.913	$13.912^{+0.061}_{-0.061}$	$\chi^2_{\text{MGS}}$	1.47	$1.62 (\nu: 0.2)$
$c_{217}$	0.99600	$0.9961^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.63	$1059.8^{+1.0}_{-0.95}$	$\chi^2_{\text{DR11CMass}}$	2.40	$2.86 (\nu: 0.2)$
$H_0$	67.84	$67.9^{+1.2}_{-1.1}$	$r_{\text{drag}}$	147.56	$147.54^{+0.69}_{-0.68}$	$\chi^2_{\text{DR11LOWZ}}$	0.42	$0.50 (\nu: 0.1)$
$\Omega_\Lambda$	0.6925	$0.693^{+0.015}_{-0.015}$	$k_{\text{D}}$	0.14031	$0.14037^{+0.00094}_{-0.00091}$	$\chi^2_{\text{prior}}$	2.0	$7.4 (\nu: 6.4)$
$\Omega_{\text{m}}$	0.3075	$0.307^{+0.015}_{-0.015}$	$100\theta_{\text{D}}$	0.16094	$0.16087^{+0.00057}_{-0.00057}$	$\chi^2_{\text{CMB}}$	11270.3	$11286.8 (\nu: 16.9)$
$\Omega_{\text{m}} h^2$	0.14150	$0.1414^{+0.0023}_{-0.0024}$	$z_{\text{eq}}$	3366	$3364^{+56}_{-56}$	$\chi^2_{\text{BAO}}$	4.30	$5.03 (\nu: 0.5)$
$\Omega_{\text{m}} h^3$	0.09599	$0.0961^{+0.0010}_{-0.00097}$	$k_{\text{eq}}$	0.010273	$0.01027^{+0.00017}_{-0.00017}$			

Best-fit  $\chi^2_{\text{eff}} = 11276.66$ ;  $\bar{\chi}^2_{\text{eff}} = 11299.30$ ;  $R - 1 = 0.00897$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMass: 2.40 DR11LOWZ: 0.42 CMB - smica\_g30\_ft1\_full\_pp: 9.31 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.45 plik\_dx11dr2\_HM\_v18\_TT: 766.56

### 18.23 base\_nrun\_r\_plikHM\_TT\_lowTEB\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022329	$0.02237^{+0.00045}_{-0.00044}$	$\sigma_8 \Omega_m^{0.5}$	0.4515	$0.450^{+0.013}_{-0.013}$	$r_{\text{drag}}/D_V(0.57)$	0.07191	$0.07195^{+0.00083}_{-0.00080}$
$\Omega_c h^2$	0.11828	$0.1182^{+0.0024}_{-0.0024}$	$\sigma_8 \Omega_m^{0.25}$	0.6072	$0.606^{+0.014}_{-0.014}$	$H(0.57)$	93.15	$93.20^{+0.58}_{-0.57}$
$100\theta_{\text{MC}}$	1.04106	$1.04109^{+0.00081}_{-0.00081}$	$\sigma_8/h^{0.5}$	0.9905	$0.988^{+0.021}_{-0.021}$	$D_A(0.57)$	1382.8	$1382^{+15}_{-15}$
$\tau$	0.0700	$0.069^{+0.027}_{-0.026}$	$\langle d^2 \rangle^{1/2}$	2.446	$2.435^{+0.054}_{-0.056}$	$F_{\text{AP}}(0.57)$	0.67455	$0.6744^{+0.0037}_{-0.0036}$
$\ln(10^{10} A_s)$	3.0702	$3.070^{+0.050}_{-0.049}$	$z_{\text{re}}$	9.19	$9.1^{+2.3}_{-2.6}$	$f\sigma_8(0.57)$	0.4733	$0.472^{+0.010}_{-0.010}$
$n_s$	0.9685	$0.9684^{+0.0089}_{-0.0089}$	$10^9 A_s$	2.155	$2.15^{+0.11}_{-0.10}$	$\sigma_8(0.57)$	0.6090	$0.608^{+0.015}_{-0.014}$
$dn_s/d \ln k$	-0.0029	$-0.007^{+0.016}_{-0.017}$	$10^9 A_s e^{-2\tau}$	1.8732	$1.875^{+0.023}_{-0.023}$	$r_{0.002}$	0.000	$< 0.181$
$r$	0.000	$< 0.172$	$D_{40}$	1217.5	$1230^{+47}_{-43}$	$r_{0.01}$	0.000	$< 0.174$
$y_{\text{cal}}$	0.99993	$1.0002^{+0.0049}_{-0.0049}$	$D_{220}$	5715	$5716^{+80}_{-80}$	$\ln(10^{10} A_t)$	-6.78	$-0.2^{+2.0}_{-2.5}$
$A_{217}^{\text{CIB}}$	67.9	$65^{+10}_{-10}$	$D_{810}$	2532.2	$2534^{+28}_{-27}$	$r_{10}$	0.0000	$< 0.0941$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{1420}$	814.4	$814^{+10}_{-10}$	$10^9 A_t$	0.000	$< 0.374$
$A_{143}^{\text{tSZ}}$	7.14	$4.8^{+3.8}_{-3.8}$	$D_{2000}$	229.97	$229.6^{+3.6}_{-3.6}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.325$
$A_{100}^{\text{PS}}$	256	$263^{+50}_{-50}$	$n_{s,0.002}$	0.978	$0.992^{+0.054}_{-0.051}$	$f_{2000}^{143}$	30.3	$31^{+6}_{-6}$
$A_{143}^{\text{PS}}$	39.9	$45^{+20}_{-20}$	$Y_{\text{P}}$	0.245375	$0.24539^{+0.00020}_{-0.00020}$	$f_{2000}^{143 \times 217}$	32.79	$33^{+4}_{-4}$
$A_{143 \times 217}^{\text{PS}}$	33	$38^{+20}_{-20}$	$Y_{\text{P}}^{\text{BBN}}$	0.246701	$0.24672^{+0.00020}_{-0.00020}$	$f_{2000}^{217}$	106.22	$106.8^{+4.1}_{-4.0}$
$A_{217}^{\text{PS}}$	96.5	$95^{+20}_{-20}$	$10^5 \text{D}/\text{H}$	2.599	$2.592^{+0.083}_{-0.084}$	$\chi_{\text{lensing}}^2$	9.47	$10.2 (\nu: 1.4)$
$A^{\text{kSZ}}$	0.0	—	$\text{Age}/\text{Gyr}$	13.790	$13.785^{+0.061}_{-0.062}$	$\chi_{\text{lowTEB}}^2$	10494.10	$10495.8 (\nu: 3.1)$
$A_{100}^{\text{dustTT}}$	7.46	$7.5^{+3.7}_{-3.7}$	$z_*$	1089.82	$1089.77^{+0.65}_{-0.65}$	$\chi_{\text{plik}}^2$	766.8	$780.9 (\nu: 16.8)$
$A_{143}^{\text{dustTT}}$	9.19	$9.1^{+3.6}_{-3.5}$	$r_*$	144.91	$144.90^{+0.61}_{-0.61}$	$\chi_{\text{H070p6}}^2$	0.63	$0.62 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.9	$17.3^{+8.0}_{-8.2}$	$100\theta_*$	1.04125	$1.04127^{+0.00081}_{-0.00079}$	$\chi_{\text{JLA}}^2$	706.607	$706.64 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$D_A/\text{Gpc}$	13.917	$13.916^{+0.060}_{-0.059}$	$\chi_{6\text{DF}}^2$	0.001	$0.038 (\nu: 0.0)$
$c_{100}$	0.99794	$0.9979^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.70	$1059.8^{+1.0}_{-0.97}$	$\chi_{\text{MGS}}^2$	1.61	$1.73 (\nu: 0.2)$
$c_{217}$	0.99605	$0.9961^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.60	$147.57^{+0.68}_{-0.68}$	$\chi_{\text{DR11CMass}}^2$	2.44	$2.88 (\nu: 0.2)$
$H_0$	67.98	$68.0^{+1.1}_{-1.1}$	$k_{\text{D}}$	0.14030	$0.14035^{+0.00094}_{-0.00091}$	$\chi_{\text{DR11LOWZ}}^2$	0.32	$0.41 (\nu: 0.1)$
$\Omega_\Lambda$	0.6943	$0.695^{+0.014}_{-0.014}$	$100\theta_{\text{D}}$	0.16089	$0.16085^{+0.00056}_{-0.00057}$	$\chi_{\text{prior}}^2$	2.0	$7.4 (\nu: 6.4)$
$\Omega_{\text{m}}$	0.3057	$0.305^{+0.014}_{-0.014}$	$z_{\text{eq}}$	3360	$3359^{+54}_{-55}$	$\chi_{\text{CMB}}^2$	11270.3	$11286.8 (\nu: 16.8)$
$\Omega_{\text{m}} h^2$	0.14125	$0.1412^{+0.0023}_{-0.0023}$	$k_{\text{eq}}$	0.010255	$0.01025^{+0.00017}_{-0.00017}$	$\chi_{\text{BAO}}^2$	4.37	$5.1 (\nu: 0.5)$
$\Omega_{\text{m}} h^3$	0.09602	$0.0961^{+0.0010}_{-0.00097}$	$100\theta_{\text{eq}}$	0.8209	$0.821^{+0.010}_{-0.010}$			
$\sigma_8$	0.8167	$0.815^{+0.018}_{-0.018}$	$100\theta_{\text{s,eq}}$	0.4534	$0.4535^{+0.0054}_{-0.0052}$			

Best-fit  $\chi_{\text{eff}}^2 = 11983.97$ ;  $\bar{\chi}_{\text{eff}}^2 = 12006.58$ ;  $R - 1 = 0.00779$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMass: 2.44 DR11LOWZ: 0.32 CMB - smica\_g30\_ftl\_full\_pp: 9.47 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.10 plik\_dx11dr2\_HM\_v18\_TT: 766.78 Hubble - H070p6: 0.62 SN - JLA December\_2013: 706.61



## 18.24 base\_nrun\_r\_plikHM\_TT\_lowTEB\_lensing\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00054}_{-0.00050}$	$\Omega_m h^2$	$0.1408^{+0.0035}_{-0.0037}$	$k_D$	$0.1403^{+0.0010}_{-0.0010}$
$\Omega_c h^2$	$0.1178^{+0.0038}_{-0.0040}$	$\Omega_m h^3$	$0.0961^{+0.0010}_{-0.00099}$	$100\theta_D$	$0.16083^{+0.00059}_{-0.00060}$
$100\theta_{MC}$	$1.04114^{+0.00092}_{-0.00091}$	$\sigma_8$	$0.816^{+0.018}_{-0.016}$	$z_{eq}$	$3350^{+84}_{-88}$
$\tau$	$0.073^{+0.032}_{-0.031}$	$\sigma_8 \Omega_m^{0.5}$	$0.449^{+0.018}_{-0.018}$	$k_{eq}$	$0.01022^{+0.00026}_{-0.00027}$
$\ln(10^{10} A_s)$	$3.077^{+0.059}_{-0.056}$	$\sigma_8 \Omega_m^{0.25}$	$0.605^{+0.015}_{-0.015}$	$100\theta_{eq}$	$0.823^{+0.018}_{-0.016}$
$n_s$	$0.970^{+0.012}_{-0.011}$	$\sigma_8/h^{0.5}$	$0.988^{+0.022}_{-0.022}$	$100\theta_{s,eq}$	$0.4545^{+0.0090}_{-0.0082}$
$dn_s/d \ln k$	$-0.008^{+0.016}_{-0.017}$	$\langle d^2 \rangle^{1/2}$	$2.435^{+0.055}_{-0.057}$	$r_{drag}/D_V(0.57)$	$0.0721^{+0.0014}_{-0.0013}$
$r$	$< 0.179$	$z_{re}$	$< 11.8$	$H(0.57)$	$93.29^{+0.89}_{-0.86}$
$y_{cal}$	$1.0002^{+0.0049}_{-0.0049}$	$10^9 A_s$	$2.17^{+0.13}_{-0.12}$	$D_A(0.57)$	$1379^{+23}_{-25}$
$A_{217}^{CIB}$	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.025}_{-0.026}$	$F_{AP}(0.57)$	$0.6737^{+0.0059}_{-0.0061}$
$\xi^{tSZ \times CIB}$	—	$D_{40}$	$1229^{+47}_{-45}$	$f\sigma_8(0.57)$	$0.472^{+0.010}_{-0.011}$
$A_{143}^{tSZ}$	$4.9^{+3.8}_{-3.8}$	$D_{220}$	$5716^{+83}_{-82}$	$\sigma_8(0.57)$	$0.610^{+0.016}_{-0.015}$
$A_{100}^{PS}$	$262^{+50}_{-60}$	$D_{810}$	$2534^{+27}_{-27}$	$r_{0.002}$	$< 0.189$
$A_{143}^{PS}$	$45^{+20}_{-20}$	$D_{1420}$	$814^{+10}_{-10}$	$r_{0.01}$	$< 0.180$
$A_{143 \times 217}^{PS}$	$38^{+20}_{-20}$	$D_{2000}$	$229.7^{+3.7}_{-3.8}$	$\ln(10^{10} A_t)$	$-0.1^{+2.0}_{-2.5}$
$A_{217}^{PS}$	$95^{+20}_{-20}$	$n_{s,0.002}$	$0.995^{+0.058}_{-0.053}$	$r_{10}$	$< 0.0985$
$A^{kSZ}$	—	$Y_P$	$0.24540^{+0.00024}_{-0.00023}$	$10^9 A_t$	$< 0.391$
$A_{100}^{dustTT}$	$7.5^{+3.7}_{-3.7}$	$Y_P^{BBN}$	$0.24673^{+0.00024}_{-0.00023}$	$10^9 A_t e^{-2\tau}$	$< 0.335$
$A_{143}^{dustTT}$	$9.1^{+3.6}_{-3.6}$	$10^5 D/H$	$2.586^{+0.095}_{-0.098}$	$f_{2000}^{143}$	$31^{+6}_{-6}$
$A_{143 \times 217}^{dustTT}$	$17.3^{+8.1}_{-8.2}$	$Age/Gyr$	$13.778^{+0.078}_{-0.084}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A_{217}^{dustTT}$	$82^{+10}_{-10}$	$z_*$	$1089.69^{+0.85}_{-0.90}$	$f_{2000}^{217}$	$106.7^{+4.1}_{-4.1}$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	$144.99^{+0.88}_{-0.84}$	$\chi^2_{lensing}$	$10.2 (\nu: 1.5)$
$c_{217}$	$0.9961^{+0.0028}_{-0.0028}$	$100\theta_*$	$1.04132^{+0.00089}_{-0.00088}$	$\chi^2_{lowTEB}$	$10495.9 (\nu: 3.1)$
$H_0$	$68.3^{+1.9}_{-1.8}$	$D_A/Gpc$	$13.924^{+0.082}_{-0.078}$	$\chi^2_{plik}$	$781.4 (\nu: 17.5)$
$\Omega_\Lambda$	$0.697^{+0.024}_{-0.023}$	$z_{drag}$	$1059.8^{+1.1}_{-1.0}$	$\chi^2_{prior}$	$7.5 (\nu: 6.4)$
$\Omega_m$	$0.303^{+0.023}_{-0.024}$	$r_{drag}$	$147.66^{+0.89}_{-0.85}$	$\chi^2_{CMB}$	$11287.4 (\nu: 17.6)$

$$\bar{\chi}^2_{eff} = 11294.89; R - 1 = 0.00700$$

## 18.25 base\_nrun\_r\_plikHM\_TTTEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022279	$0.02230^{+0.00034}_{-0.00031}$	$A_{143}^{\text{dust}TE}$	0.154	$0.16^{+0.11}_{-0.11}$	$100\theta_*$	1.04107	$1.04105^{+0.00062}_{-0.00061}$
$\Omega_c h^2$	0.11921	$0.1191^{+0.0027}_{-0.0027}$	$A_{143 \times 217}^{\text{dust}TE}$	0.335	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.900	$13.902^{+0.055}_{-0.056}$
$100\theta_{\text{MC}}$	1.04087	$1.04086^{+0.00063}_{-0.00062}$	$A_{217}^{\text{dust}TE}$	1.660	$1.66^{+0.49}_{-0.50}$	$z_{\text{drag}}$	1059.67	$1059.70^{+0.67}_{-0.64}$
$\tau$	0.0643	$0.064^{+0.028}_{-0.026}$	$c_{100}$	0.99817	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.40	$147.42^{+0.59}_{-0.60}$
$\ln(10^{10} A_s)$	3.061	$3.062^{+0.051}_{-0.049}$	$c_{217}$	0.99607	$0.9961^{+0.0029}_{-0.0028}$	$k_D$	0.14047	$0.14046^{+0.00065}_{-0.00065}$
$n_s$	0.9659	$0.9658^{+0.0094}_{-0.0092}$	$H_0$	67.54	$67.6^{+1.3}_{-1.2}$	$100\theta_D$	0.160902	$0.16088^{+0.00037}_{-0.00039}$
$dn_s/d \ln k$	-0.0007	$-0.005^{+0.014}_{-0.015}$	$\Omega_\Lambda$	0.6884	$0.689^{+0.016}_{-0.017}$	$z_{\text{eq}}$	3381	$3378^{+61}_{-61}$
$r$	0.000	$< 0.146$	$\Omega_m$	0.3116	$0.311^{+0.017}_{-0.016}$	$k_{\text{eq}}$	0.010319	$0.01031^{+0.00019}_{-0.00019}$
$y_{\text{cal}}$	1.00005	$1.0002^{+0.0050}_{-0.0049}$	$\Omega_m h^2$	0.14213	$0.1420^{+0.0026}_{-0.0025}$	$100\theta_{\text{eq}}$	0.8168	$0.817^{+0.012}_{-0.012}$
$A_{217}^{\text{CIB}}$	67.8	$65^{+10}_{-10}$	$\Omega_m h^3$	0.09600	$0.09600^{+0.00062}_{-0.00060}$	$100\theta_{s,\text{eq}}$	0.4513	$0.4516^{+0.0060}_{-0.0059}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$\sigma_8$	0.8160	$0.815^{+0.017}_{-0.017}$	$r_{\text{drag}}/D_V(0.57)$	0.07157	$0.07162^{+0.00093}_{-0.00091}$
$A_{143}^{\text{tSZ}}$	7.28	$5.1^{+3.8}_{-3.9}$	$\sigma_8 \Omega_m^{0.5}$	0.4555	$0.454^{+0.014}_{-0.013}$	$H(0.57)$	92.97	$93.00^{+0.56}_{-0.53}$
$A_{100}^{\text{PS}}$	257	$265^{+60}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6096	$0.608^{+0.013}_{-0.013}$	$D_A(0.57)$	1388.6	$1388^{+16}_{-17}$
$A_{143}^{\text{PS}}$	38.9	$45^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9929	$0.991^{+0.020}_{-0.020}$	$F_{\text{AP}}(0.57)$	0.67605	$0.6758^{+0.0043}_{-0.0042}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.455	$2.445^{+0.052}_{-0.051}$	$f\sigma_8(0.57)$	0.4745	$0.4734^{+0.0098}_{-0.0096}$
$A_{217}^{\text{PS}}$	96.7	$96^{+20}_{-20}$	$z_{\text{re}}$	8.68	$8.6^{+2.5}_{-2.7}$	$\sigma_8(0.57)$	0.6070	$0.606^{+0.014}_{-0.014}$
$A^{\text{kSZ}}$	0.0	—	$10^9 A_s$	2.136	$2.14^{+0.11}_{-0.10}$	$r_{0.002}$	0.000	$< 0.147$
$A_{100}^{\text{dust}TT}$	7.47	$7.5^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8780	$1.879^{+0.023}_{-0.023}$	$r_{0.01}$	0.000	$< 0.144$
$A_{143}^{\text{dust}TT}$	8.97	$9.1^{+3.5}_{-3.6}$	$D_{40}$	1228.3	$1238^{+43}_{-39}$	$\ln(10^{10} A_t)$	-7.02	$-0.3^{+1.9}_{-2.4}$
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.3^{+8.2}_{-8.2}$	$D_{220}$	5723	$5719^{+78}_{-78}$	$r_{10}$	0.0000	$< 0.0763$
$A_{217}^{\text{dust}TT}$	81.8	$82^{+10}_{-10}$	$D_{810}$	2534.2	$2535^{+27}_{-27}$	$10^9 A_t$	0.000	$< 0.314$
$A_{100}^{\text{dust}EE}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	814.8	$814.0^{+9.9}_{-9.8}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.274$
$A_{100 \times 143}^{\text{dust}EE}$	0.0492	$0.0488^{+0.0098}_{-0.0099}$	$D_{2000}$	230.10	$229.6^{+3.5}_{-3.6}$	$f_{2000}^{143}$	29.8	$31^{+6}_{-6}$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.0998^{+0.064}_{-0.063}$	$n_{s,0.002}$	0.9681	$0.982^{+0.047}_{-0.044}$	$f_{2000}^{143 \times 217}$	32.58	$33^{+4}_{-4}$
$A_{143}^{\text{dust}EE}$	0.1007	$0.100^{+0.013}_{-0.014}$	$Y_P$	0.245353	$0.24536^{+0.00015}_{-0.00015}$	$f_{2000}^{217}$	106.10	$106.7^{+4.0}_{-4.0}$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.223^{+0.091}_{-0.091}$	$Y_P^{\text{BBN}}$	0.246679	$0.24669^{+0.00015}_{-0.00015}$	$\chi^2_{\text{lensing}}$	9.98	$10.6 (\nu: 1.9)$
$A_{217}^{\text{dust}EE}$	0.651	$0.65^{+0.25}_{-0.26}$	$10^5 D/H$	2.609	$2.605^{+0.060}_{-0.063}$	$\chi^2_{\text{lowTEB}}$	10495.08	$10496.5 (\nu: 3.2)$
$A_{100}^{\text{dust}TE}$	0.143	$0.142^{+0.074}_{-0.074}$	Age/Gyr	13.805	$13.803^{+0.050}_{-0.052}$	$\chi^2_{\text{plik}}$	2434.9	$2455.1 (\nu: 24.3)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.057}_{-0.057}$	$z_*$	1089.97	$1089.93^{+0.57}_{-0.59}$	$\chi^2_{\text{prior}}$	7.2	$19.4 (\nu: 15.3)$
$A_{100 \times 217}^{\text{dust}TE}$	0.303	$0.30^{+0.16}_{-0.17}$	$r_*$	144.71	$144.73^{+0.60}_{-0.60}$	$\chi^2_{\text{CMB}}$	12940.0	$12962.2 (\nu: 24.0)$

Best-fit  $\chi^2_{\text{eff}} = 12947.17$ ;  $\bar{\chi}^2_{\text{eff}} = 12981.61$ ;  $R - 1 = 0.01649$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.98 lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.08 plik\_dx11dr2\_HM\_v18.TTTEE: 2434.94



## 18.26 base\_nrun\_r\_plikHM\_TTTEE\_lowTEB\_lensing\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022291	$0.02231^{+0.00030}_{-0.00029}$	$A_{217}^{\text{dustTE}}$	1.669	$1.66^{+0.49}_{-0.50}$	$k_D$	0.14046	$0.14043^{+0.00060}_{-0.00060}$
$\Omega_c h^2$	0.11909	$0.1188^{+0.0021}_{-0.0021}$	$c_{100}$	0.99816	$0.9981^{+0.0015}_{-0.0015}$	$100\theta_D$	0.160893	$0.16087^{+0.00036}_{-0.00038}$
$100\theta_{MC}$	1.04089	$1.04089^{+0.00059}_{-0.00058}$	$c_{217}$	0.99608	$0.9961^{+0.0029}_{-0.0028}$	$z_{eq}$	3378.5	$3373^{+47}_{-46}$
$\tau$	0.0650	$0.066^{+0.025}_{-0.023}$	$H_0$	67.60	$67.70^{+0.92}_{-0.91}$	$k_{eq}$	0.010312	$0.01030^{+0.00014}_{-0.00014}$
$\ln(10^{10} A_s)$	3.0625	$3.064^{+0.045}_{-0.045}$	$\Omega_\Lambda$	0.6892	$0.691^{+0.012}_{-0.013}$	$100\theta_{eq}$	0.8173	$0.8183^{+0.0089}_{-0.0087}$
$n_s$	0.9661	$0.9664^{+0.0082}_{-0.0080}$	$\Omega_m$	0.3108	$0.309^{+0.013}_{-0.012}$	$100\theta_{s,eq}$	0.45153	$0.4521^{+0.0045}_{-0.0045}$
$dn_s/d \ln k$	-0.0011	$-0.005^{+0.014}_{-0.015}$	$\Omega_m h^2$	0.14203	$0.1418^{+0.0020}_{-0.0019}$	$r_{drag}/D_V(0.57)$	0.07161	$0.07169^{+0.00069}_{-0.00069}$
$r$	0.000	< 0.146	$\Omega_m h^3$	0.09601	$0.09600^{+0.00062}_{-0.00058}$	$H(0.57)$	92.994	$93.03^{+0.43}_{-0.42}$
$y_{cal}$	1.00003	$1.0002^{+0.0049}_{-0.0048}$	$\sigma_8$	0.8159	$0.815^{+0.017}_{-0.016}$	$D_A(0.57)$	1387.8	$1386^{+12}_{-12}$
$A_{217}^{CIB}$	67.8	$65^{+10}_{-10}$	$\sigma_8 \Omega_m^{0.5}$	0.4549	$0.453^{+0.012}_{-0.011}$	$F_{AP}(0.57)$	0.67585	$0.6755^{+0.0032}_{-0.0031}$
$\xi^{tSZ \times CIB}$	0.01	—	$\sigma_8 \Omega_m^{0.25}$	0.6092	$0.608^{+0.013}_{-0.013}$	$f\sigma_8(0.57)$	0.4742	$0.4733^{+0.0098}_{-0.0095}$
$A_{143}^{tSZ}$	7.33	$5.1^{+3.8}_{-4.0}$	$\sigma_8/h^{0.5}$	0.9924	$0.990^{+0.020}_{-0.020}$	$\sigma_8(0.57)$	0.6072	$0.607^{+0.014}_{-0.013}$
$A_{100}^{PS}$	257	$265^{+50}_{-60}$	$\langle d^2 \rangle^{1/2}$	2.454	$2.444^{+0.053}_{-0.051}$	$r_{0.002}$	0.000	< 0.147
$A_{143}^{PS}$	38.8	$45^{+20}_{-20}$	$z_{re}$	8.74	$8.8^{+2.2}_{-2.3}$	$r_{0.01}$	0.000	< 0.144
$A_{143 \times 217}^{PS}$	33	$39^{+20}_{-20}$	$10^9 A_s$	2.138	$2.142^{+0.099}_{-0.095}$	$\ln(10^{10} A_t)$	-6.89	$-0.2^{+1.9}_{-2.4}$
$A_{217}^{PS}$	96.6	$96^{+20}_{-20}$	$10^9 A_s e^{-2\tau}$	1.8775	$1.878^{+0.022}_{-0.022}$	$r_{10}$	0.0000	< 0.0766
$A^{kSZ}$	0.0	—	$D_{40}$	1227.1	$1237^{+43}_{-39}$	$10^9 A_t$	0.000	< 0.316
$A_{100}^{\text{dustTT}}$	7.48	$7.5^{+3.6}_{-3.6}$	$D_{220}$	5724	$5720^{+77}_{-78}$	$10^9 A_t e^{-2\tau}$	0.000	< 0.274
$A_{143}^{\text{dustTT}}$	9.14	$9.1^{+3.5}_{-3.6}$	$D_{810}$	2534.1	$2535^{+27}_{-27}$	$f_{2000}^{143}$	29.9	$31^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.3^{+8.1}_{-8.3}$	$D_{1420}$	814.7	$814.1^{+9.7}_{-9.8}$	$f_{2000}^{143 \times 217}$	32.61	$33^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$D_{2000}$	230.05	$229.6^{+3.5}_{-3.5}$	$f_{2000}^{217}$	106.14	$106.6^{+4.0}_{-3.9}$
$A_{100}^{\text{dustEE}}$	0.0816	$0.081^{+0.011}_{-0.011}$	$n_{s,0.002}$	0.9697	$0.982^{+0.047}_{-0.044}$	$\chi^2_{lensing}$	9.93	10.5 ( $\nu$ : 1.8)
$A_{100 \times 143}^{\text{dustEE}}$	0.0491	$0.0488^{+0.0099}_{-0.010}$	$Y_P$	0.245358	$0.24537^{+0.00013}_{-0.00013}$	$\chi^2_{lowTEB}$	10494.93	10496.4 ( $\nu$ : 3.1)
$A_{100 \times 217}^{\text{dustEE}}$	0.100	$0.0999^{+0.064}_{-0.063}$	$Y_P^{BBN}$	0.246684	$0.24669^{+0.00014}_{-0.00013}$	$\chi^2_{plik}$	2435.1	2455.0 ( $\nu$ : 24.0)
$A_{143}^{\text{dustEE}}$	0.1005	$0.100^{+0.013}_{-0.014}$	$10^5 D/H$	2.606	$2.603^{+0.054}_{-0.057}$	$\chi^2_{6DF}$	0.029	0.045 ( $\nu$ : 0.0)
$A_{143 \times 217}^{\text{dustEE}}$	0.225	$0.223^{+0.092}_{-0.093}$	Age/Gyr	13.8025	$13.800^{+0.042}_{-0.044}$	$\chi^2_{MGS}$	1.22	1.38 ( $\nu$ : 0.1)
$A_{217}^{\text{dustEE}}$	0.652	$0.65^{+0.25}_{-0.26}$	$z_*$	1089.940	$1089.89^{+0.47}_{-0.49}$	$\chi^2_{DR11CMass}$	2.49	2.74 ( $\nu$ : 0.1)
$A_{100}^{\text{dustTE}}$	0.141	$0.142^{+0.075}_{-0.075}$	$r_*$	144.727	$144.78^{+0.48}_{-0.48}$	$\chi^2_{DR11LOWZ}$	0.68	0.66 ( $\nu$ : 0.1)
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.132^{+0.056}_{-0.058}$	$100\theta_*$	1.04109	$1.04108^{+0.00058}_{-0.00058}$	$\chi^2_{prior}$	7.2	19.5 ( $\nu$ : 15.6)
$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.9016	$13.906^{+0.045}_{-0.046}$	$\chi^2_{CMB}$	12940.0	12961.8 ( $\nu$ : 23.7)
$A_{143}^{\text{dustTE}}$	0.153	$0.16^{+0.11}_{-0.11}$	$z_{drag}$	1059.70	$1059.71^{+0.65}_{-0.62}$	$\chi^2_{BAO}$	4.41	4.83 ( $\nu$ : 0.2)
$A_{143 \times 217}^{\text{dustTE}}$	0.338	$0.34^{+0.16}_{-0.16}$	$r_{drag}$	147.419	$147.46^{+0.50}_{-0.49}$			

Best-fit  $\chi^2_{\text{eff}} = 12951.58$ ;  $\bar{\chi}^2_{\text{eff}} = 12986.14$ ;  $R - 1 = 0.02288$   
 $\chi^2_{\text{eff}}$ : BAO - 6DF: 0.03 MGS: 1.22 DR11CMASS: 2.49 DR11LOWZ: 0.68 CMB - smica\_g30\_ftl\_full\_pp: 9.93 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.93 plik\_dx11dr2\_HM\_v18\_TT  
2435.11



# 18.27 base\_nrun\_r\_plikHM\_TTTEE\_lowTEB\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022312	$0.02233^{+0.00031}_{-0.00029}$	$\mathbf{c_{100}}$	0.99820	$0.9981^{+0.0015}_{-0.0015}$	$z_{\text{eq}}$	3372.1	$3369^{+46}_{-46}$
$\Omega_c h^2$	0.11880	$0.1187^{+0.0020}_{-0.0020}$	$\mathbf{c_{217}}$	0.99604	$0.9961^{+0.0029}_{-0.0028}$	$k_{\text{eq}}$	0.010292	$0.01028^{+0.00014}_{-0.00014}$
$100\theta_{\text{MC}}$	1.04090	$1.04091^{+0.00059}_{-0.00058}$	$H_0$	67.72	$67.79^{+0.90}_{-0.90}$	$100\theta_{\text{eq}}$	0.8185	$0.8192^{+0.0087}_{-0.0085}$
$\tau$	0.0664	$0.067^{+0.025}_{-0.023}$	$\Omega_\Lambda$	0.6909	$0.692^{+0.012}_{-0.012}$	$100\theta_{\text{s,eq}}$	0.45216	$0.4525^{+0.0045}_{-0.0044}$
$\ln(10^{10} A_s)$	3.0651	$3.066^{+0.046}_{-0.044}$	$\Omega_m$	0.3091	$0.308^{+0.012}_{-0.012}$	$r_{\text{drag}}/D_V(0.57)$	0.07171	$0.07176^{+0.00067}_{-0.00067}$
$n_s$	0.9666	$0.9669^{+0.0080}_{-0.0080}$	$\Omega_m h^2$	0.14175	$0.1416^{+0.0019}_{-0.0019}$	$H(0.57)$	93.043	$93.07^{+0.43}_{-0.42}$
$dn_s/d \ln k$	-0.0017	$-0.005^{+0.014}_{-0.015}$	$\Omega_m h^3$	0.09600	$0.09601^{+0.00062}_{-0.00059}$	$D_A(0.57)$	1386.1	$1385^{+12}_{-12}$
$r$	0.000	$< 0.147$	$\sigma_8$	0.8160	$0.815^{+0.017}_{-0.017}$	$F_{\text{AP}}(0.57)$	0.67541	$0.6752^{+0.0031}_{-0.0030}$
$y_{\text{cal}}$	1.00007	$1.0002^{+0.0049}_{-0.0048}$	$\sigma_8 \Omega_m^{0.5}$	0.4536	$0.453^{+0.012}_{-0.011}$	$f\sigma_8(0.57)$	0.4738	$0.4732^{+0.0098}_{-0.0096}$
$A_{217}^{\text{CIB}}$	67.8	$65^{+10}_{-10}$	$\sigma_8 \Omega_m^{0.25}$	0.6084	$0.607^{+0.013}_{-0.013}$	$\sigma_8(0.57)$	0.6076	$0.607^{+0.013}_{-0.013}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$\sigma_8/h^{0.5}$	0.9915	$0.990^{+0.020}_{-0.020}$	$r_{0.002}$	0.000	$< 0.149$
$A_{143}^{\text{tSZ}}$	7.29	$5.1^{+3.8}_{-3.9}$	$\langle d^2 \rangle^{1/2}$	2.452	$2.444^{+0.054}_{-0.051}$	$r_{0.01}$	0.000	$< 0.145$
$A_{100}^{\text{PS}}$	257	$265^{+50}_{-60}$	$z_{\text{re}}$	8.87	$8.9^{+2.2}_{-2.3}$	$\ln(10^{10} A_t)$	-7.13	$-0.2^{+1.9}_{-2.4}$
$A_{143}^{\text{PS}}$	38.8	$45^{+20}_{-20}$	$10^9 A_s$	2.144	$2.15^{+0.10}_{-0.094}$	$r_{10}$	0.0000	$< 0.0774$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$10^9 A_s e^{-2\tau}$	1.8770	$1.877^{+0.022}_{-0.022}$	$10^9 A_t$	0.000	$< 0.317$
$A_{217}^{\text{PS}}$	96.6	$96^{+20}_{-20}$	$D_{40}$	1225.1	$1236^{+43}_{-38}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.276$
$A^{\text{kSZ}}$	0.0	—	$D_{220}$	5726	$5721^{+77}_{-78}$	$f_{2000}^{143}$	29.8	$31^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.55	$7.5^{+3.6}_{-3.6}$	$D_{810}$	2534.4	$2535^{+27}_{-27}$	$f_{2000}^{143 \times 217}$	32.56	$33^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.06	$9.1^{+3.5}_{-3.6}$	$D_{1420}$	814.8	$814.2^{+9.7}_{-9.7}$	$f_{2000}^{217}$	106.10	$106.6^{+4.0}_{-3.9}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.3^{+8.1}_{-8.4}$	$D_{2000}$	230.07	$229.7^{+3.4}_{-3.5}$	$\chi^2_{\text{lensing}}$	9.87	$10.4 (\nu: 1.8)$
$A_{217}^{\text{dustTT}}$	81.6	$82^{+10}_{-10}$	$n_{\text{s},0.002}$	0.9722	$0.983^{+0.047}_{-0.044}$	$\chi^2_{\text{lowTEB}}$	10494.70	$10496.3 (\nu: 3.1)$
$A_{100}^{\text{dustEE}}$	0.0817	$0.081^{+0.011}_{-0.011}$	$Y_{\text{P}}$	0.245367	$0.24537^{+0.00014}_{-0.00013}$	$\chi^2_{\text{plik}}$	2435.6	$2455.1 (\nu: 24.1)$
$A_{100 \times 143}^{\text{dustEE}}$	0.0494	$0.0489^{+0.0098}_{-0.010}$	$Y_{\text{P}}^{\text{BBN}}$	0.246694	$0.24670^{+0.00014}_{-0.00013}$	$\chi^2_{\text{H070p6}}$	0.749	$0.73 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.100^{+0.064}_{-0.063}$	$10^5 \text{D}/\text{H}$	2.602	$2.599^{+0.054}_{-0.057}$	$\chi^2_{\text{JLA}}$	706.683	$706.69 (\nu: 0.0)$
$A_{143}^{\text{dustEE}}$	0.1008	$0.100^{+0.013}_{-0.014}$	$\text{Age}/\text{Gyr}$	13.7987	$13.796^{+0.042}_{-0.043}$	$\chi^2_{6\text{DF}}$	0.016	$0.036 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustEE}}$	0.223	$0.223^{+0.092}_{-0.093}$	$z_*$	1089.887	$1089.86^{+0.46}_{-0.48}$	$\chi^2_{\text{MGS}}$	1.34	$1.46 (\nu: 0.1)$
$A_{217}^{\text{dustEE}}$	0.650	$0.65^{+0.25}_{-0.26}$	$r_*$	144.787	$144.81^{+0.47}_{-0.47}$	$\chi^2_{\text{DR11CMass}}$	2.43	$2.70 (\nu: 0.1)$
$A_{100}^{\text{dustTE}}$	0.140	$0.142^{+0.074}_{-0.076}$	$100\theta_*$	1.04110	$1.04110^{+0.00058}_{-0.00057}$	$\chi^2_{\text{DR11LOWZ}}$	0.55	$0.57 (\nu: 0.1)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.132^{+0.056}_{-0.058}$	$D_{\text{A}}/\text{Gpc}$	13.9072	$13.909^{+0.045}_{-0.045}$	$\chi^2_{\text{prior}}$	7.1	$19.5 (\nu: 15.5)$
$A_{100 \times 217}^{\text{dustTE}}$	0.304	$0.30^{+0.16}_{-0.16}$	$z_{\text{drag}}$	1059.70	$1059.74^{+0.65}_{-0.60}$	$\chi^2_{\text{CMB}}$	12940.1	$12961.9 (\nu: 23.6)$
$A_{143}^{\text{dustTE}}$	0.156	$0.16^{+0.11}_{-0.11}$	$r_{\text{drag}}$	147.476	$147.50^{+0.49}_{-0.48}$	$\chi^2_{\text{BAO}}$	4.33	$4.78 (\nu: 0.2)$
$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.16}_{-0.16}$	$k_{\text{D}}$	0.14042	$0.14041^{+0.00060}_{-0.00060}$			
$A_{217}^{\text{dustTE}}$	1.655	$1.66^{+0.49}_{-0.50}$	$100\theta_{\text{D}}$	0.160876	$0.16086^{+0.00036}_{-0.00038}$			

Best-fit  $\chi^2_{\text{eff}} = 13659.04$ ;  $\bar{\chi}^2_{\text{eff}} = 13693.57$ ;  $R - 1 = 0.02159$   
 $\chi^2_{\text{eff}}$ : BAO - 6DF: 0.02 MGS: 1.34 DR11CMASS: 2.43 DR11LOWZ: 0.55 CMB - smica\_g30\_ftl\_full\_pp: 9.87 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.70 plik\_dx11dr2\_HM\_v18\_TT  
2435.56 Hubble - H070p6: 0.75 SN - JLA December\_2013: 706.68



18.28 base\_nrun\_r\_plikHM\_TTTEE\_lowTEB\_lensing\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00033}_{-0.00031}$	$A_{143}^{\text{dust}TE}$	$0.16^{+0.11}_{-0.11}$	$100\theta_*$	$1.04106^{+0.00061}_{-0.00061}$
$\Omega_c h^2$	$0.1190^{+0.0025}_{-0.0026}$	$A_{143 \times 217}^{\text{dust}TE}$	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	$13.904^{+0.054}_{-0.053}$
$100\theta_{\text{MC}}$	$1.04087^{+0.00062}_{-0.00062}$	$A_{217}^{\text{dust}TE}$	$1.66^{+0.48}_{-0.49}$	$z_{\text{drag}}$	$1059.71^{+0.69}_{-0.65}$
$\tau$	$0.066^{+0.024}_{-0.023}$	$c_{100}$	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	$147.44^{+0.58}_{-0.57}$
$\ln(10^{10} A_s)$	$3.065^{+0.045}_{-0.044}$	$c_{217}$	$0.9961^{+0.0029}_{-0.0028}$	$k_D$	$0.14045^{+0.00065}_{-0.00064}$
$n_s$	$0.9662^{+0.0092}_{-0.0086}$	$H_0$	$67.7^{+1.2}_{-1.1}$	$100\theta_D$	$0.16088^{+0.00037}_{-0.00039}$
$dn_s/d \ln k$	$-0.005^{+0.014}_{-0.015}$	$\Omega_\Lambda$	$0.690^{+0.016}_{-0.016}$	$z_{\text{eq}}$	$3376^{+57}_{-59}$
$r$	$< 0.146$	$\Omega_m$	$0.310^{+0.016}_{-0.016}$	$k_{\text{eq}}$	$0.01030^{+0.00017}_{-0.00018}$
$y_{\text{cal}}$	$1.0001^{+0.0049}_{-0.0048}$	$\Omega_m h^2$	$0.1419^{+0.0024}_{-0.0025}$	$100\theta_{\text{eq}}$	$0.818^{+0.011}_{-0.011}$
$A_{217}^{\text{CIB}}$	$65^{+10}_{-10}$	$\Omega_m h^3$	$0.09600^{+0.00062}_{-0.00059}$	$100\theta_{s,\text{eq}}$	$0.4518^{+0.0059}_{-0.0055}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\sigma_8$	$0.815^{+0.016}_{-0.015}$	$r_{\text{drag}}/D_V(0.57)$	$0.07166^{+0.00091}_{-0.00085}$
$A_{143}^{\text{tSZ}}$	$5.1^{+3.8}_{-3.9}$	$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.014}_{-0.013}$	$H(0.57)$	$93.02^{+0.55}_{-0.51}$
$A_{100}^{\text{PS}}$	$265^{+50}_{-60}$	$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.013}_{-0.013}$	$D_A(0.57)$	$1387^{+16}_{-16}$
$A_{143}^{\text{PS}}$	$45^{+20}_{-20}$	$\sigma_8/h^{0.5}$	$0.991^{+0.020}_{-0.019}$	$F_{\text{AP}}(0.57)$	$0.6757^{+0.0040}_{-0.0041}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.052}_{-0.050}$	$f\sigma_8(0.57)$	$0.4737^{+0.0096}_{-0.0091}$
$A_{217}^{\text{PS}}$	$96^{+20}_{-20}$	$z_{\text{re}}$	$< 10.7$	$\sigma_8(0.57)$	$0.607^{+0.013}_{-0.013}$
$A^{\text{kSZ}}$	—	$10^9 A_s$	$2.143^{+0.097}_{-0.093}$	$r_{0.002}$	$< 0.147$
$A_{100}^{\text{dust}TT}$	$7.5^{+3.6}_{-3.7}$	$10^9 A_s e^{-2\tau}$	$1.878^{+0.023}_{-0.023}$	$r_{0.01}$	$< 0.144$
$A_{143}^{\text{dust}TT}$	$9.1^{+3.5}_{-3.6}$	$D_{40}$	$1237^{+43}_{-39}$	$\ln(10^{10} A_t)$	$-0.2^{+1.9}_{-2.4}$
$A_{143 \times 217}^{\text{dust}TT}$	$17.3^{+8.1}_{-8.3}$	$D_{220}$	$5719^{+77}_{-79}$	$r_{10}$	$< 0.0765$
$A_{217}^{\text{dust}TT}$	$82^{+10}_{-10}$	$D_{810}$	$2535^{+27}_{-27}$	$10^9 A_t$	$< 0.315$
$A_{100}^{\text{dust}EE}$	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	$814.0^{+9.8}_{-9.8}$	$10^9 A_t e^{-2\tau}$	$< 0.274$
$A_{100 \times 143}^{\text{dust}EE}$	$0.0488^{+0.0099}_{-0.010}$	$D_{2000}$	$229.6^{+3.5}_{-3.5}$	$f_{2000}^{143}$	$31^{+6}_{-6}$
$A_{100 \times 217}^{\text{dust}EE}$	$0.0998^{+0.064}_{-0.063}$	$n_{s,0.002}$	$0.982^{+0.047}_{-0.044}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A_{143}^{\text{dust}EE}$	$0.100^{+0.013}_{-0.014}$	$Y_P$	$0.24536^{+0.00015}_{-0.00015}$	$f_{2000}^{217}$	$106.6^{+4.0}_{-3.9}$
$A_{143 \times 217}^{\text{dust}EE}$	$0.223^{+0.092}_{-0.093}$	$Y_P^{\text{BBN}}$	$0.24669^{+0.00015}_{-0.00015}$	$\chi_{\text{lensing}}^2$	$10.6 (\nu: 2.0)$
$A_{217}^{\text{dust}EE}$	$0.65^{+0.25}_{-0.26}$	$10^5 D/H$	$2.604^{+0.059}_{-0.063}$	$\chi_{\text{lowTEB}}^2$	$10496.4 (\nu: 3.1)$
$A_{100}^{\text{dust}TE}$	$0.142^{+0.075}_{-0.075}$	$\text{Age/Gyr}$	$13.801^{+0.049}_{-0.051}$	$\chi_{\text{plik}}^2$	$2455.1 (\nu: 24.3)$
$A_{100 \times 143}^{\text{dust}TE}$	$0.132^{+0.057}_{-0.057}$	$z_*$	$1089.91^{+0.54}_{-0.58}$	$\chi_{\text{prior}}^2$	$19.4 (\nu: 15.4)$
$A_{100 \times 217}^{\text{dust}TE}$	$0.30^{+0.16}_{-0.16}$	$r_*$	$144.75^{+0.58}_{-0.57}$	$\chi_{\text{CMB}}^2$	$12962.1 (\nu: 24.1)$

$$\bar{\chi}_{\text{eff}}^2 = 12981.52; R - 1 = 0.01928$$

## 18.29 base\_nrun\_r\_plikHM\_TT\_WMAPTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022284	$0.02235^{+0.00050}_{-0.00047}$	$\Omega_m h^2$	0.14297	$0.1429^{+0.0039}_{-0.0039}$	$k_D$	0.14071	$0.1408^{+0.0011}_{-0.0011}$
$\Omega_c h^2$	0.12004	$0.1199^{+0.0041}_{-0.0041}$	$\Omega_m h^3$	0.09613	$0.0962^{+0.0010}_{-0.00097}$	$100\theta_D$	0.16086	$0.16079^{+0.00057}_{-0.00059}$
$100\theta_{MC}$	1.04084	$1.04089^{+0.00090}_{-0.00094}$	$\sigma_8$	0.8287	$0.828^{+0.023}_{-0.022}$	$z_{eq}$	3401	$3398^{+93}_{-92}$
$\tau$	0.0767	$0.078^{+0.026}_{-0.024}$	$\sigma_8 \Omega_m^{0.5}$	0.4660	$0.465^{+0.027}_{-0.026}$	$k_{eq}$	0.010381	$0.01037^{+0.00028}_{-0.00028}$
$\ln(10^{10} A_s)$	3.090	$3.092^{+0.054}_{-0.049}$	$\sigma_8 \Omega_m^{0.25}$	0.6214	$0.620^{+0.025}_{-0.024}$	$100\theta_{eq}$	0.8132	$0.814^{+0.018}_{-0.017}$
$n_s$	0.9641	$0.965^{+0.012}_{-0.011}$	$\sigma_8/h^{0.5}$	1.0106	$1.009^{+0.035}_{-0.034}$	$100\theta_{s,eq}$	0.4494	$0.4498^{+0.0091}_{-0.0089}$
$dn_s/d \ln k$	-0.0060	$-0.010^{+0.016}_{-0.017}$	$\langle d^2 \rangle^{1/2}$	2.490	$2.480^{+0.080}_{-0.081}$	$r_{drag}/D_V(0.57)$	0.07131	$0.0714^{+0.0014}_{-0.0014}$
$r$	0.000	< 0.140	$z_{re}$	9.86	$9.9^{+2.2}_{-2.2}$	$H(0.57)$	92.88	$92.97^{+0.84}_{-0.78}$
$y_{cal}$	1.00032	$1.0004^{+0.0049}_{-0.0049}$	$10^9 A_s$	2.197	$2.20^{+0.12}_{-0.11}$	$D_A(0.57)$	1392.3	$1390^{+25}_{-25}$
$A_{217}^{CIB}$	68.0	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8843	$1.885^{+0.028}_{-0.027}$	$F_{AP}(0.57)$	0.6772	$0.6769^{+0.0065}_{-0.0063}$
$\xi^{tSZ \times CIB}$	0.00	—	$D_{40}$	1223.9	$1231^{+44}_{-43}$	$f\sigma_8(0.57)$	0.4830	$0.482^{+0.017}_{-0.017}$
$A_{143}^{tSZ}$	6.96	$4.8^{+3.8}_{-3.8}$	$D_{220}$	5718	$5715^{+82}_{-80}$	$\sigma_8(0.57)$	0.6153	$0.615^{+0.016}_{-0.015}$
$A_{100}^{PS}$	257	$263^{+50}_{-50}$	$D_{810}$	2536.8	$2538^{+27}_{-27}$	$r_{0.002}$	0.000	< 0.144
$A_{143}^{PS}$	41.1	$46^{+20}_{-20}$	$D_{1420}$	813.8	$813^{+10}_{-9.9}$	$r_{0.01}$	0.000	< 0.139
$A_{143 \times 217}^{PS}$	33	$39^{+20}_{-20}$	$D_{2000}$	229.75	$229.5^{+3.9}_{-3.7}$	$\ln(10^{10} A_t)$	-7.64	$-0.4^{+2.0}_{-2.5}$
$A_{217}^{PS}$	97.2	$96^{+20}_{-20}$	$n_{s,0.002}$	0.983	$0.998^{+0.054}_{-0.052}$	$r_{10}$	0.0000	< 0.0751
$A^{kSZ}$	0.1	—	$Y_P$	0.245355	$0.24538^{+0.00022}_{-0.00022}$	$10^9 A_t$	0.000	< 0.306
$A_{100}^{dustTT}$	7.43	$7.5^{+3.7}_{-3.7}$	$Y_P^{BBN}$	0.246681	$0.24671^{+0.00022}_{-0.00022}$	$10^9 A_t e^{-2\tau}$	0.000	< 0.263
$A_{143}^{dustTT}$	9.06	$9.1^{+3.6}_{-3.6}$	$10^5 D/H$	2.607	$2.595^{+0.091}_{-0.093}$	$f_{2000}^{143}$	30.8	$31^{+6}_{-6}$
$A_{143 \times 217}^{dustTT}$	17.8	$17.2^{+8.3}_{-8.1}$	Age/Gyr	13.809	$13.799^{+0.075}_{-0.077}$	$f_{2000}^{143 \times 217}$	33.18	$34^{+4}_{-4}$
$A_{217}^{dustTT}$	82.0	$82^{+10}_{-10}$	$z_*$	1090.03	$1089.93^{+0.84}_{-0.84}$	$f_{2000}^{217}$	106.70	$107.0^{+4.1}_{-4.1}$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.49	$144.48^{+0.95}_{-0.94}$	$\chi_{WMAPTEB}^2$	19732.7	$19735.0 (\nu: 4.5)$
$c_{217}$	0.99605	$0.9961^{+0.0029}_{-0.0028}$	$100\theta_*$	1.04103	$1.04108^{+0.00089}_{-0.00092}$	$\chi_{plik}^2$	764.8	$779.8 (\nu: 17.7)$
$H_0$	67.24	$67.4^{+1.9}_{-1.8}$	$D_A/\text{Gpc}$	13.879	$13.878^{+0.088}_{-0.087}$	$\chi_{prior}^2$	2.0	$7.4 (\nu: 6.3)$
$\Omega_\Lambda$	0.6838	$0.685^{+0.025}_{-0.026}$	$z_{drag}$	1059.74	$1059.9^{+1.0}_{-1.0}$	$\chi_{CMB}^2$	20497.5	$20514.8 (\nu: 18.0)$
$\Omega_m$	0.3162	$0.315^{+0.026}_{-0.025}$	$r_{drag}$	147.18	$147.15^{+0.97}_{-0.95}$			

Best-fit  $\chi_{eff}^2 = 20499.51$ ;  $\bar{\chi}_{eff}^2 = 20522.23$ ;  $R - 1 = 0.01420$

$\chi_{eff}^2$ : CMB - bfitlike\_WMAP353ggf\_LFI312\_nw8: 19732.72 plik\_dx11dr2\_HM\_v18\_TT: 764.80

### 18.30 base\_nrun\_r\_plikHM\_TT\_WMAPTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00049}_{-0.00045}$	$\Omega_m h^2$	$0.1411^{+0.0031}_{-0.0029}$	$k_D$	$0.14034^{+0.00094}_{-0.00087}$
$\Omega_c h^2$	$0.1181^{+0.0032}_{-0.0032}$	$\Omega_m h^3$	$0.09610^{+0.00095}_{-0.00096}$	$100\theta_D$	$0.16084^{+0.00055}_{-0.00055}$
$100\theta_{MC}$	$1.04112^{+0.00088}_{-0.00088}$	$\sigma_8$	$0.816^{+0.015}_{-0.015}$	$z_{eq}$	$3356^{+73}_{-70}$
$\tau$	$0.071^{+0.023}_{-0.022}$	$\sigma_8 \Omega_m^{0.5}$	$0.450^{+0.017}_{-0.017}$	$k_{eq}$	$0.01024^{+0.00022}_{-0.00021}$
$\ln(10^{10} A_s)$	$3.073^{+0.044}_{-0.042}$	$\sigma_8 \Omega_m^{0.25}$	$0.606^{+0.015}_{-0.015}$	$100\theta_{eq}$	$0.822^{+0.014}_{-0.014}$
$n_s$	$0.969^{+0.010}_{-0.010}$	$\sigma_8/h^{0.5}$	$0.989^{+0.021}_{-0.021}$	$100\theta_{s,eq}$	$0.4538^{+0.0072}_{-0.0071}$
$dn_s/d \ln k$	$-0.007^{+0.016}_{-0.017}$	$\langle d^2 \rangle^{1/2}$	$2.437^{+0.054}_{-0.055}$	$r_{drag}/D_V(0.57)$	$0.0720^{+0.0012}_{-0.0011}$
$r$	$< 0.144$	$z_{re}$	$9.2^{+2.0}_{-2.0}$	$H(0.57)$	$93.23^{+0.77}_{-0.69}$
$y_{cal}$	$1.0002^{+0.0049}_{-0.0049}$	$10^9 A_s$	$2.161^{+0.097}_{-0.090}$	$D_A(0.57)$	$1381^{+20}_{-21}$
$A_{217}^{CIB}$	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.023}_{-0.023}$	$F_{AP}(0.57)$	$0.6742^{+0.0051}_{-0.0051}$
$\xi^{tSZ \times CIB}$	—	$D_{40}$	$1227^{+44}_{-43}$	$f\sigma_8(0.57)$	$0.473^{+0.010}_{-0.010}$
$A_{143}^{tSZ}$	$4.9^{+3.9}_{-3.8}$	$D_{220}$	$5716^{+81}_{-78}$	$\sigma_8(0.57)$	$0.609^{+0.012}_{-0.012}$
$A_{100}^{PS}$	$263^{+50}_{-50}$	$D_{810}$	$2534^{+27}_{-27}$	$r_{0.002}$	$< 0.150$
$A_{143}^{PS}$	$45^{+20}_{-20}$	$D_{1420}$	$814^{+10}_{-9.8}$	$r_{0.01}$	$< 0.144$
$A_{143 \times 217}^{PS}$	$38^{+20}_{-20}$	$D_{2000}$	$229.7^{+3.9}_{-3.6}$	$\ln(10^{10} A_t)$	$-0.3^{+2.0}_{-2.5}$
$A_{217}^{PS}$	$95^{+20}_{-20}$	$n_{s,0.002}$	$0.991^{+0.054}_{-0.054}$	$r_{10}$	$< 0.0778$
$A^{kSZ}$	—	$Y_P$	$0.24540^{+0.00022}_{-0.00021}$	$10^9 A_t$	$< 0.315$
$A_{100}^{dustTT}$	$7.5^{+3.7}_{-3.8}$	$Y_P^{BBN}$	$0.24672^{+0.00022}_{-0.00021}$	$10^9 A_t e^{-2\tau}$	$< 0.270$
$A_{143}^{dustTT}$	$9.1^{+3.3}_{-3.5}$	$10^5 D/H$	$2.590^{+0.085}_{-0.090}$	$f_{2000}^{143}$	$31^{+6}_{-6}$
$A_{143 \times 217}^{dustTT}$	$17.2^{+8.1}_{-7.7}$	$Age/Gyr$	$13.782^{+0.074}_{-0.073}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A_{217}^{dustTT}$	$82^{+10}_{-10}$	$z_*$	$1089.74^{+0.74}_{-0.79}$	$f_{2000}^{217}$	$106.7^{+4.2}_{-4.3}$
$c_{100}$	$0.9979^{+0.0016}_{-0.0015}$	$r_*$	$144.93^{+0.74}_{-0.76}$	$\chi^2_{lensing}$	$10.2 (\nu: 1.4)$
$c_{217}$	$0.9960^{+0.0027}_{-0.0028}$	$100\theta_*$	$1.04130^{+0.00088}_{-0.00086}$	$\chi^2_{WMAPTEB}$	$19734.5 (\nu: 3.8)$
$H_0$	$68.1^{+1.6}_{-1.5}$	$D_A/Gpc$	$13.918^{+0.067}_{-0.070}$	$\chi^2_{plik}$	$781 (\nu: 92.7)$
$\Omega_\Lambda$	$0.696^{+0.020}_{-0.020}$	$z_{drag}$	$1059.82^{+0.99}_{-0.96}$	$\chi^2_{prior}$	$7.4 (\nu: 6.1)$
$\Omega_m$	$0.304^{+0.020}_{-0.020}$	$r_{drag}$	$147.59^{+0.72}_{-0.77}$	$\chi^2_{CMB}$	$20530 (\nu: 95.4)$

$$\bar{\chi}^2_{eff} = 20533.29; R - 1 = 0.02821$$

### 18.31 base\_nrun\_r\_plikHM\_TT\_WMAPTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00045}_{-0.00042}$	$\sigma_8$	$0.827^{+0.022}_{-0.021}$	$100\theta_{\text{eq}}$	$0.817^{+0.011}_{-0.011}$
$\Omega_c h^2$	$0.1191^{+0.0025}_{-0.0025}$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.018}_{-0.018}$	$100\theta_{\text{s,eq}}$	$0.4513^{+0.0057}_{-0.0054}$
$100\theta_{\text{MC}}$	$1.04099^{+0.00081}_{-0.00081}$	$\sigma_8 \Omega_m^{0.25}$	$0.617^{+0.019}_{-0.019}$	$r_{\text{drag}}/D_V(0.57)$	$0.07164^{+0.00084}_{-0.00081}$
$\tau$	$0.079^{+0.026}_{-0.025}$	$\sigma_8/h^{0.5}$	$1.005^{+0.029}_{-0.028}$	$H(0.57)$	$93.10^{+0.55}_{-0.54}$
$\ln(10^{10} A_s)$	$3.093^{+0.055}_{-0.050}$	$\langle d^2 \rangle^{1/2}$	$2.471^{+0.066}_{-0.068}$	$D_A(0.57)$	$1386^{+15}_{-15}$
$n_s$	$0.9663^{+0.0089}_{-0.0088}$	$z_{\text{re}}$	$10.0^{+2.2}_{-2.3}$	$F_{\text{AP}}(0.57)$	$0.6757^{+0.0037}_{-0.0038}$
$dn_s/d \ln k$	$-0.010^{+0.017}_{-0.017}$	$10^9 A_s$	$2.21^{+0.12}_{-0.11}$	$f\sigma_8(0.57)$	$0.480^{+0.014}_{-0.014}$
$r$	$< 0.143$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.024}_{-0.024}$	$\sigma_8(0.57)$	$0.615^{+0.016}_{-0.015}$
$y_{\text{cal}}$	$1.0004^{+0.0048}_{-0.0049}$	$D_{40}$	$1228^{+43}_{-42}$	$r_{0.002}$	$< 0.148$
$A_{217}^{\text{CIB}}$	$65^{+10}_{-10}$	$D_{220}$	$5719^{+80}_{-79}$	$r_{0.01}$	$< 0.142$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{810}$	$2537^{+27}_{-27}$	$\ln(10^{10} A_t)$	$-0.3^{+2.0}_{-2.4}$
$A_{143}^{\text{tSZ}}$	$4.8^{+3.8}_{-3.8}$	$D_{1420}$	$814^{+10}_{-9.7}$	$r_{10}$	$< 0.0770$
$A_{100}^{\text{PS}}$	$264^{+60}_{-50}$	$D_{2000}$	$229.6^{+3.8}_{-3.6}$	$10^9 A_t$	$< 0.314$
$A_{143}^{\text{PS}}$	$45^{+20}_{-20}$	$n_{\text{s},0.002}$	$0.999^{+0.055}_{-0.053}$	$10^9 A_t e^{-2\tau}$	$< 0.268$
$A_{143 \times 217}^{\text{PS}}$	$38^{+20}_{-20}$	$Y_{\text{P}}$	$0.24540^{+0.00020}_{-0.00020}$	$f_{2000}^{143}$	$31^{+6}_{-6}$
$A_{217}^{\text{PS}}$	$96^{+20}_{-20}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24673^{+0.00020}_{-0.00020}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A^{\text{kSZ}}$	—	$10^5 \text{D/H}$	$2.587^{+0.081}_{-0.083}$	$f_{2000}^{217}$	$106.9^{+4.1}_{-4.1}$
$A_{100}^{\text{dustTT}}$	$7.5^{+3.6}_{-3.7}$	$\text{Age/Gyr}$	$13.789^{+0.059}_{-0.059}$	$\chi_{\text{WMAPTEB}}^2$	$19734.9 (\nu: 4.6)$
$A_{143}^{\text{dustTT}}$	$9.1^{+3.6}_{-3.6}$	$z_*$	$1089.82^{+0.63}_{-0.63}$	$\chi_{\text{plik}}^2$	$780 (\nu: 100.6)$
$A_{143 \times 217}^{\text{dustTT}}$	$17.3^{+8.0}_{-8.1}$	$r_*$	$144.64^{+0.66}_{-0.65}$	$\chi_{6\text{DF}}^2$	$0.063 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$100\theta_*$	$1.04117^{+0.00080}_{-0.00080}$	$\chi_{\text{MGS}}^2$	$1.33 (\nu: 0.1)$
$c_{100}$	$0.9979^{+0.0016}_{-0.0015}$	$D_{\text{A}}/\text{Gpc}$	$13.892^{+0.064}_{-0.064}$	$\chi_{\text{DR11CMass}}^2$	$2.91 (\nu: 0.2)$
$c_{217}$	$0.9961^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	$1059.9^{+1.0}_{-0.94}$	$\chi_{\text{DR11LOWZ}}^2$	$0.77 (\nu: 0.2)$
$H_0$	$67.7^{+1.1}_{-1.1}$	$r_{\text{drag}}$	$147.29^{+0.74}_{-0.73}$	$\chi_{\text{prior}}^2$	$7.4 (\nu: 6.4)$
$\Omega_{\Lambda}$	$0.690^{+0.015}_{-0.015}$	$k_{\text{D}}$	$0.14067^{+0.00098}_{-0.00096}$	$\chi_{\text{CMB}}^2$	$20510 (\nu: 102.6)$
$\Omega_{\text{m}}$	$0.310^{+0.015}_{-0.015}$	$100\theta_{\text{D}}$	$0.16077^{+0.00056}_{-0.00057}$	$\chi_{\text{BAO}}^2$	$5.1 (\nu: 0.5)$
$\Omega_{\text{m}} h^2$	$0.1422^{+0.0024}_{-0.0024}$	$z_{\text{eq}}$	$3382^{+58}_{-58}$		
$\Omega_{\text{m}} h^3$	$0.0963^{+0.0010}_{-0.00098}$	$k_{\text{eq}}$	$0.01032^{+0.00018}_{-0.00018}$		

$$\bar{\chi}_{\text{eff}}^2 = 20527.01; R - 1 = 0.01835$$

## 19 omegak

### 19.1 base\_omegak\_plikHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02250	$0.02257^{+0.00052}_{-0.00051}$	$\Omega_m$	0.441	$0.51^{+0.20}_{-0.18}$	$D_A/\text{Gpc}$	13.912	$13.918^{+0.091}_{-0.089}$
$\Omega_c h^2$	0.11794	$0.1175^{+0.0045}_{-0.0045}$	$\Omega_m h^2$	0.14109	$0.1407^{+0.0042}_{-0.0042}$	$z_{\text{drag}}$	1060.09	$1060.2^{+1.0}_{-0.99}$
$100\theta_{\text{MC}}$	1.04109	$1.0412^{+0.0010}_{-0.00099}$	$\Omega_m h^3$	0.0798	$0.075^{+0.015}_{-0.014}$	$r_{\text{drag}}$	147.49	$147.54^{+0.97}_{-0.95}$
$\tau$	0.0700	$0.058^{+0.039}_{-0.047}$	$\sigma_8$	0.797	$0.776^{+0.053}_{-0.058}$	$k_D$	0.14055	$0.1405^{+0.0010}_{-0.0010}$
$\Omega_K$	-0.033	$-0.052^{+0.049}_{-0.055}$	$\sigma_8 \Omega_m^{0.5}$	0.529	$0.550^{+0.070}_{-0.067}$	$100\theta_D$	0.16067	$0.16062^{+0.00057}_{-0.00055}$
$\ln(10^{10} A_s)$	3.070	$3.045^{+0.084}_{-0.087}$	$\sigma_8 \Omega_m^{0.25}$	0.6494	$0.652^{+0.028}_{-0.031}$	$z_{\text{eq}}$	3356	$3347^{+100}_{-100}$
$n_s$	0.9711	$0.972^{+0.013}_{-0.013}$	$\sigma_8/h^{0.5}$	1.0597	$1.065^{+0.044}_{-0.050}$	$k_{\text{eq}}$	0.010243	$0.01021^{+0.00030}_{-0.00031}$
$y_{\text{cal}}$	1.00004	$1.0002^{+0.0050}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.648	$2.68^{+0.15}_{-0.15}$	$100\theta_{\text{eq}}$	0.8221	$0.824^{+0.020}_{-0.019}$
$A_{217}^{\text{CIB}}$	63.2	$61^{+10}_{-10}$	$z_{\text{re}}$	9.03	$7.7^{+4.1}_{-4.6}$	$100\theta_{\text{s,eq}}$	0.4539	$0.455^{+0.010}_{-0.0098}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.31	—	$10^9 A_s$	2.154	$2.10^{+0.18}_{-0.18}$	$r_{\text{drag}}/D_V(0.57)$	0.0633	$0.0609^{+0.0076}_{-0.0069}$
$A_{143}^{\text{tSZ}}$	7.15	$5.6^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8722	$1.872^{+0.028}_{-0.027}$	$H(0.57)$	84.2	$81.8^{+7.8}_{-7.0}$
$A_{100}^{\text{PS}}$	244	$248^{+50}_{-50}$	$D_{40}$	1212.8	$1208^{+35}_{-35}$	$D_A(0.57)$	1592	$1671^{+200}_{-200}$
$A_{143}^{\text{PS}}$	38.3	$38^{+20}_{-20}$	$D_{220}$	5733	$5748^{+83}_{-82}$	$F_{\text{AP}}(0.57)$	0.7020	$0.713^{+0.033}_{-0.032}$
$A_{143 \times 217}^{\text{PS}}$	38.2	$37^{+20}_{-20}$	$D_{810}$	2529.6	$2530^{+28}_{-27}$	$f\sigma_8(0.57)$	0.4913	$0.485^{+0.019}_{-0.021}$
$A_{217}^{\text{PS}}$	99.8	$98^{+20}_{-20}$	$D_{1420}$	814.0	$814^{+10}_{-9.9}$	$\sigma_8(0.57)$	0.565	$0.541^{+0.062}_{-0.067}$
$A^{\text{kSZ}}$	0.00	$< 7.10$	$D_{2000}$	232.22	$232.5^{+4.0}_{-3.9}$	$f_{2000}^{143}$	26.8	$27^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.44	$7.5^{+3.6}_{-3.7}$	$n_{\text{s},0.002}$	0.9711	$0.972^{+0.013}_{-0.013}$	$f_{2000}^{143 \times 217}$	29.99	$30^{+5}_{-5}$
$A_{143}^{\text{dustTT}}$	9.04	$8.9^{+3.7}_{-3.6}$	$Y_{\text{P}}$	0.245452	$0.24548^{+0.00023}_{-0.00023}$	$f_{2000}^{217}$	103.70	$103.4^{+4.4}_{-4.2}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$16.6^{+8.2}_{-8.2}$	$Y_{\text{P}}^{\text{BBN}}$	0.246779	$0.24681^{+0.00023}_{-0.00023}$	$\chi_{\text{lowTEB}}^2$	10493.74	$10494.8 (\nu: 1.0)$
$A_{217}^{\text{dustTT}}$	82.1	$81^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	2.566	$2.555^{+0.096}_{-0.092}$	$\chi_{\text{plik}}^2$	759.9	$774.7 (\nu: 14.9)$
$c_{100}$	0.99795	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	15.03	$15.5^{+1.4}_{-1.3}$	$\chi_{\text{prior}}^2$	1.8	$7.1 (\nu: 6.0)$
$c_{217}$	0.99561	$0.9956^{+0.0028}_{-0.0028}$	$z_*$	1089.57	$1089.46^{+0.94}_{-0.93}$	$\chi_{\text{CMB}}^2$	11253.6	$11269.5 (\nu: 15.9)$
$H_0$	56.5	$53^{+10}_{-10}$	$r_*$	144.86	$144.94^{+0.99}_{-0.97}$			
$\Omega_\Lambda$	0.592	$0.54^{+0.14}_{-0.15}$	$100\theta_*$	1.04126	$1.04138^{+0.00098}_{-0.00097}$			

Best-fit  $\chi_{\text{eff}}^2 = 11255.46$ ;  $\bar{\chi}_{\text{eff}}^2 = 11276.56$ ;  $R - 1 = 0.02296$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10493.74 plik\_dx11dr2\_HM\_v18\_TT: 759.89

## 19.2 base\_omegak\_plikHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022425	$0.02242^{+0.00034}_{-0.00033}$	$A_{100 \times 217}^{\text{dustTE}}$	0.303	$0.30^{+0.17}_{-0.17}$	Age/Gyr	15.04	$15.2^{+1.1}_{-1.1}$
$\Omega_c h^2$	0.11849	$0.1185^{+0.0030}_{-0.0029}$	$A_{143}^{\text{dustTE}}$	0.153	$0.15^{+0.11}_{-0.11}$	$z_*$	1089.72	$1089.72^{+0.62}_{-0.61}$
$100\theta_{\text{MC}}$	1.04093	$1.04096^{+0.00065}_{-0.00064}$	$A_{143 \times 217}^{\text{dustTE}}$	0.335	$0.34^{+0.16}_{-0.16}$	$r_*$	144.78	$144.80^{+0.62}_{-0.64}$
$\tau$	0.0583	$0.054^{+0.036}_{-0.043}$	$A_{217}^{\text{dustTE}}$	1.65	$1.65^{+0.51}_{-0.50}$	$100\theta_*$	1.04110	$1.04114^{+0.00064}_{-0.00062}$
$\Omega_K$	-0.0329	$-0.040^{+0.038}_{-0.041}$	$c_{100}$	0.99827	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.907	$13.908^{+0.058}_{-0.059}$
$\ln(10^{10} A_s)$	3.049	$3.039^{+0.078}_{-0.081}$	$c_{217}$	0.99564	$0.9957^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.97	$1059.94^{+0.69}_{-0.65}$
$n_s$	0.9682	$0.9680^{+0.0092}_{-0.0095}$	$H_0$	56.4	$55^{+9}_{-8}$	$r_{\text{drag}}$	147.43	$147.45^{+0.60}_{-0.63}$
$y_{\text{cal}}$	0.9998	$0.99996^{+0.0051}_{-0.0050}$	$\Omega_\Lambda$	0.588	$0.57^{+0.11}_{-0.12}$	$k_D$	0.14055	$0.14052^{+0.00066}_{-0.00062}$
$A_{217}^{\text{CIB}}$	62.1	$62^{+10}_{-10}$	$\Omega_m$	0.445	$0.47^{+0.16}_{-0.15}$	$100\theta_D$	0.160731	$0.16075^{+0.00038}_{-0.00038}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.54	—	$\Omega_m h^2$	0.14156	$0.1415^{+0.0028}_{-0.0027}$	$z_{\text{eq}}$	3367	$3366^{+66}_{-63}$
$A_{143}^{\text{tSZ}}$	6.87	$5.7^{+3.4}_{-3.7}$	$\Omega_m h^3$	0.0798	$0.078^{+0.013}_{-0.012}$	$k_{\text{eq}}$	0.010278	$0.01027^{+0.00020}_{-0.00019}$
$A_{100}^{\text{PS}}$	247	$252^{+50}_{-50}$	$\sigma_8$	0.7896	$0.782^{+0.047}_{-0.049}$	$100\theta_{\text{eq}}$	0.8197	$0.820^{+0.012}_{-0.013}$
$A_{143}^{\text{PS}}$	43.3	$40^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.527	$0.534^{+0.057}_{-0.056}$	$100\theta_{s,\text{eq}}$	0.4527	$0.4528^{+0.0063}_{-0.0065}$
$A_{143 \times 217}^{\text{PS}}$	46.1	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6450	$0.646^{+0.024}_{-0.026}$	$r_{\text{drag}}/D_V(0.57)$	0.0632	$0.0624^{+0.0067}_{-0.0065}$
$A_{217}^{\text{PS}}$	103.2	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0516	$1.053^{+0.038}_{-0.042}$	$H(0.57)$	84.2	$83.4^{+6.9}_{-6.7}$
$A^{\text{kSZ}}$	0.00	$< 6.98$	$\langle d^2 \rangle^{1/2}$	2.631	$2.64^{+0.13}_{-0.13}$	$D_A(0.57)$	1594	$1622^{+200}_{-200}$
$A_{100}^{\text{dustTT}}$	7.35	$7.5^{+3.7}_{-3.6}$	$z_{\text{re}}$	7.94	$7.3^{+3.9}_{-4.4}$	$F_{\text{AP}}(0.57)$	0.7029	$0.707^{+0.027}_{-0.026}$
$A_{143}^{\text{dustTT}}$	8.90	$8.8^{+3.6}_{-3.6}$	$10^9 A_s$	2.109	$2.09^{+0.17}_{-0.17}$	$f\sigma_8(0.57)$	0.4872	$0.484^{+0.017}_{-0.017}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$16.6^{+8.1}_{-8.1}$	$10^9 A_s e^{-2\tau}$	1.8767	$1.876^{+0.024}_{-0.024}$	$\sigma_8(0.57)$	0.560	$0.551^{+0.056}_{-0.057}$
$A_{217}^{\text{dustTT}}$	82.0	$81^{+10}_{-10}$	$D_{40}$	1217.0	$1216^{+31}_{-29}$	$f_{2000}^{143}$	27.0	$27^{+6}_{-5}$
$A_{100}^{\text{dustEE}}$	0.0813	$0.082^{+0.011}_{-0.011}$	$D_{220}$	5742	$5743^{+78}_{-76}$	$f_{2000}^{143 \times 217}$	30.41	$30^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0492	$0.0493^{+0.0097}_{-0.0098}$	$D_{810}$	2532.5	$2531^{+28}_{-27}$	$f_{2000}^{217}$	103.89	$104.2^{+3.9}_{-3.7}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.099^{+0.063}_{-0.063}$	$D_{1420}$	813.8	$813.3^{+9.4}_{-9.3}$	$\chi_{\text{lowTEB}}^2$	10493.88	$10495.0 (\nu: 0.9)$
$A_{143}^{\text{dustEE}}$	0.1008	$0.101^{+0.014}_{-0.013}$	$D_{2000}$	231.70	$231.5^{+3.2}_{-3.1}$	$\chi_{\text{plik}}^2$	2428.5	$2448.1 (\nu: 22.0)$
$A_{143 \times 217}^{\text{dustEE}}$	0.223	$0.224^{+0.091}_{-0.090}$	$n_{s,0.002}$	0.9682	$0.9680^{+0.0092}_{-0.0095}$	$\chi_{\text{prior}}^2$	6.5	$19.2 (\nu: 14.7)$
$A_{217}^{\text{dustEE}}$	0.650	$0.65^{+0.26}_{-0.25}$	$Y_P$	0.245417	$0.24541^{+0.00015}_{-0.00015}$	$\chi_{\text{CMB}}^2$	12922.4	$12943.1 (\nu: 22.9)$
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.074}_{-0.074}$	$Y_P^{\text{BBN}}$	0.246744	$0.24674^{+0.00015}_{-0.00015}$			
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.132^{+0.058}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.581	$2.582^{+0.063}_{-0.063}$			

Best-fit  $\chi_{\text{eff}}^2 = 12928.92$ ;  $\bar{\chi}_{\text{eff}}^2 = 12962.34$ ;  $R - 1 = 0.01122$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10493.88 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2428.53

### 19.3 base\_omegak\_CamSpecHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02253	$0.02258^{+0.00052}_{-0.00050}$ (+0.0 $\sigma$ )	$\beta_1^1$	-0.24	$-0.1^{+2.0}_{-2.0}$	$r_*$	145.01	$144.97^{+0.95}_{-0.94}$ (+0.1 $\sigma$ )
$\Omega_c h^2$	0.11731	$0.1174^{+0.0044}_{-0.0043}$ (-0.1 $\sigma$ )	$H_0$	56.9	$53^{+10}_{-9}$ (-0.0 $\sigma$ )	$100\theta_*$	1.04139	$1.04144^{+0.00092}_{-0.00094}$ (+0.1 $\sigma$ )
$100\theta_{MC}$	1.04121	$1.04127^{+0.00094}_{-0.00096}$ (+0.1 $\sigma$ )	$\Omega_\Lambda$	0.598	$0.54^{+0.13}_{-0.15}$ (+0.0 $\sigma$ )	$z_{drag}$	1060.12	$1060.2^{+1.0}_{-0.99}$ (-0.0 $\sigma$ )
$\tau$	0.0722	$0.058^{+0.040}_{-0.043}$ (+0.0 $\sigma$ )	$\Omega_m$	0.434	$0.51^{+0.20}_{-0.18}$ (+0.0 $\sigma$ )	$r_{drag}$	147.63	$147.57^{+0.92}_{-0.92}$ (+0.1 $\sigma$ )
$\Omega_K$	-0.032	$-0.052^{+0.048}_{-0.054}$ (-0.0 $\sigma$ )	$\Omega_m h^2$	0.14049	$0.1406^{+0.0041}_{-0.0040}$ (-0.1 $\sigma$ )	$k_D$	0.14044	$0.14053^{+0.00098}_{-0.00098}$ (-0.0 $\sigma$ )
$\ln(10^{10} A_s)$	3.072	$3.043^{+0.081}_{-0.079}$ (-0.1 $\sigma$ )	$\Omega_m h^3$	0.0799	$0.075^{+0.015}_{-0.014}$ (-0.0 $\sigma$ )	$100\theta_D$	0.16065	$0.16061^{+0.00156}_{-0.00055}$ (-0.1 $\sigma$ )
$n_s$	0.9738	$0.974^{+0.013}_{-0.013}$ (+0.4 $\sigma$ )	$\sigma_8$	0.797	$0.775^{+0.050}_{-0.057}$ (-0.0 $\sigma$ )	$z_{eq}$	3342	$3344^{+98}_{-95}$ (-0.1 $\sigma$ )
$y_{cal}$	1.00047	$0.9999^{+0.0045}_{-0.0048}$ (-0.1 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.525	$0.549^{+0.070}_{-0.067}$ (-0.0 $\sigma$ )	$100\theta_{eq}$	0.8249	$0.825^{+0.019}_{-0.019}$ (+0.1 $\sigma$ )
$A_{100}^{PS}$	236.9	$235^{+50}_{-50}$ (-0.5 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6469	$0.652^{+0.029}_{-0.031}$ (-0.0 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.0635	$0.0608^{+0.0073}_{-0.0067}$ (-0.0 $\sigma$ )
$A_{143}^{PS}$	32.4	$33^{+20}_{-20}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0566	$1.064^{+0.049}_{-0.049}$ (-0.0 $\sigma$ )	$H(0.57)$	84.4	$81.7^{+7.5}_{-6.9}$ (-0.0 $\sigma$ )
$A_{217}^{PS}$	100.5	$101^{+30}_{-30}$ (+0.3 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.636	$2.68^{+0.15}_{-0.16}$ (-0.1 $\sigma$ )	$D_A(0.57)$	1586	$1672^{+200}_{-200}$ (+0.0 $\sigma$ )
$A_{217}^{CIB}$	45.4	$43^{+10}_{-10}$ (-2.8 $\sigma$ )	$z_{re}$	9.21	$7.7^{+4.1}_{-4.4}$ (+0.0 $\sigma$ )	$F_{AP}(0.57)$	0.7006	$0.713^{+0.033}_{-0.031}$ (+0.0 $\sigma$ )
$A_{143}^{tSZ}$	4.67	$< 7.18$ (-1.0 $\sigma$ )	$10^9 A_s$	2.158	$2.10^{+0.17}_{-0.17}$ (-0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4904	$0.484^{+0.019}_{-0.021}$ (-0.0 $\sigma$ )
$r_{143 \times 217}^{PS}$	0.473	$0.53^{+0.25}_{-0.24}$	$10^9 A_s e^{-2\tau}$	1.8680	$1.867^{+0.027}_{-0.026}$ (-0.4 $\sigma$ )	$\sigma_8(0.57)$	0.567	$0.540^{+0.060}_{-0.065}$ (-0.0 $\sigma$ )
$\xi^{tSZ \times CIB}$	0.08	—	$D_{40}$	1206.1	$1199^{+35}_{-34}$ (-0.5 $\sigma$ )	$Y_P^{BBN}$	0.246374	$0.24639^{+0.00022}_{-0.00022}$ (-3.6 $\sigma$ )
$A^{kSZ}$	2.3	—	$D_{220}$	5723	$5723^{+81}_{-81}$ (-0.6 $\sigma$ )	$f_{2000}^{143}$	25.9	$25^{+6}_{-6}$ (-0.4 $\sigma$ )
$A_{100}^{dust}$	1.004	$0.997^{+0.38}_{-0.38}$	$D_{810}$	2528.3	$2525^{+26}_{-28}$ (-0.3 $\sigma$ )	$f_{2000}^{217}$	104.22	$103.7^{+4.4}_{-4.3}$ (+0.1 $\sigma$ )
$A_{143}^{dust}$	1.034	$1.02^{+0.36}_{-0.35}$	$D_{1420}$	814.7	$813.7^{+9.6}_{-10}$ (-0.1 $\sigma$ )	$f_{2000}^{143 \times 217}$	29.13	$29^{+5}_{-5}$ (-0.4 $\sigma$ )
$A_{217}^{dust}$	1.220	$1.23^{+0.22}_{-0.23}$	$n_{s,0.002}$	0.9738	$0.974^{+0.013}_{-0.013}$ (+0.4 $\sigma$ )	$\chi_{lowTEB}^2$	10493.41	$10494.4 (\nu: 0.7)$ (-0.3 $\sigma$ )
$A_{143 \times 217}^{dust}$	0.977	$0.96^{+0.35}_{-0.35}$	$Y_P$	0.245045	$0.24506^{+0.00021}_{-0.00021}$ (-3.6 $\sigma$ )	$\chi_{CamSpec}^2$	8042.1	$8057.0 (\nu: 15.2)$
$c_{100}$	0.99688	$0.9969^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	Age/Gyr	15.02	$15.5^{+1.4}_{-1.2}$ (+0.0 $\sigma$ )	$\chi_{prior}^2$	3.1	$8.3 (\nu: 5.6)$ (+0.3 $\sigma$ )
$c_{217}$	0.99679	$0.9967^{+0.0035}_{-0.0035}$ (+0.8 $\sigma$ )	$z_*$	1089.46	$1089.42^{+0.93}_{-0.91}$ (-0.1 $\sigma$ )	$\chi_{CMB}^2$	18535.5	$18551.4 (\nu: 16.0)$ (+1292.6 $\sigma$ )

Best-fit  $\chi_{eff}^2 = 18538.57$ ;  $\Delta\chi_{eff}^2 = 7283.10$ ;  $\bar{\chi}_{eff}^2 = 18559.65$ ;  $\Delta\bar{\chi}_{eff}^2 = 7283.09$ ;  $R - 1 = 0.01475$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10493.41 ( $\Delta$  -0.33) CamSpec like\_v9.10CMH\_unified: 8042.07

## 19.4 base\_omegak\_CamSpecHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02259^{+0.00053}_{-0.00051}$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$r_*$	$145.00^{+0.92}_{-0.91}$
$\Omega_c h^2$	$0.1172^{+0.0044}_{-0.0042}$	$H_0$	$55^{+9}_{-9}$	$100\theta_*$	$1.04146^{+0.00092}_{-0.00091}$
$100\theta_{\text{MC}}$	$1.04129^{+0.00095}_{-0.00093}$	$\Omega_\Lambda$	$0.56^{+0.11}_{-0.12}$	$z_{\text{drag}}$	$1060.2^{+1.0}_{-1.0}$
$\tau$	$0.068^{+0.029}_{-0.026}$	$\Omega_m$	$0.48^{+0.16}_{-0.15}$	$r_{\text{drag}}$	$147.61^{+0.90}_{-0.91}$
$\Omega_K$	$-0.045^{+0.040}_{-0.044}$	$\Omega_m h^2$	$0.1404^{+0.0040}_{-0.0039}$	$k_D$	$0.14050^{+0.00099}_{-0.00097}$
$\ln(10^{10} A_s)$	$3.063^{+0.061}_{-0.052}$	$\Omega_m h^3$	$0.077^{+0.014}_{-0.013}$	$100\theta_D$	$0.16060^{+0.00057}_{-0.00055}$
$n_s$	$0.975^{+0.013}_{-0.012}$	$\sigma_8$	$0.786^{+0.043}_{-0.041}$	$z_{\text{eq}}$	$3340^{+95}_{-93}$
$y_{\text{cal}}$	$0.99995^{+0.0046}_{-0.0048}$	$\sigma_8 \Omega_m^{0.5}$	$0.543^{+0.063}_{-0.065}$	$100\theta_{\text{eq}}$	$0.826^{+0.019}_{-0.019}$
$A_{100}^{\text{PS}}$	$235^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	$0.652^{+0.029}_{-0.032}$	$r_{\text{drag}}/D_V(0.57)$	$0.0618^{+0.0068}_{-0.0065}$
$A_{143}^{\text{PS}}$	$33^{+20}_{-20}$	$\sigma_8/h^{0.5}$	$1.066^{+0.049}_{-0.051}$	$H(0.57)$	$82.7^{+7.1}_{-6.7}$
$A_{217}^{\text{PS}}$	$101^{+30}_{-30}$	$\langle d^2 \rangle^{1/2}$	$2.67^{+0.15}_{-0.15}$	$D_A(0.57)$	$1641^{+200}_{-200}$
$A_{217}^{\text{CIB}}$	$43^{+10}_{-10}$	$z_{\text{re}}$	$< 11.3$	$F_{\text{AP}}(0.57)$	$0.708^{+0.027}_{-0.025}$
$A_{143}^{\text{tSZ}}$	$< 7.20$	$10^9 A_s$	$2.14^{+0.13}_{-0.11}$	$f\sigma_8(0.57)$	$0.488^{+0.016}_{-0.015}$
$r_{143 \times 217}^{\text{PS}}$	$0.53^{+0.25}_{-0.24}$	$10^9 A_s e^{-2\tau}$	$1.866^{+0.027}_{-0.027}$	$\sigma_8(0.57)$	$0.552^{+0.053}_{-0.051}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1201^{+35}_{-34}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24639^{+0.00022}_{-0.00022}$
$A^{\text{kSZ}}$	—	$D_{220}$	$5722^{+82}_{-80}$	$f_{2000}^{143}$	$25^{+6}_{-6}$
$A_{100}^{\text{dust}}$	$1.00^{+0.37}_{-0.39}$	$D_{810}$	$2525^{+26}_{-27}$	$f_{2000}^{217}$	$103.7^{+4.5}_{-4.3}$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.35}$	$D_{1420}$	$813.9^{+9.8}_{-9.9}$	$f_{2000}^{143 \times 217}$	$29^{+5}_{-5}$
$A_{217}^{\text{dust}}$	$1.23^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.975^{+0.013}_{-0.012}$	$\chi_{\text{lowTEB}}^2$	$10494.1 (\nu: 0.7)$
$A_{143 \times 217}^{\text{dust}}$	$0.96^{+0.36}_{-0.35}$	$Y_{\text{P}}$	$0.24507^{+0.00022}_{-0.00022}$	$\chi_{\text{CamSpec}}^2$	$8056.9 (\nu: 14.8)$
$c_{100}$	$0.9969^{+0.0018}_{-0.0019}$	Age/Gyr	$15.3^{+1.1}_{-1.1}$	$\chi_{\text{prior}}^2$	$8.3 (\nu: 5.6)$
$c_{217}$	$0.9967^{+0.0034}_{-0.0034}$	$z_*$	$1089.39^{+0.94}_{-0.93}$	$\chi_{\text{CMB}}^2$	$18551.0 (\nu: 15.5)$

$$\bar{\chi}_{\text{eff}}^2 = 18559.27; R - 1 = 0.02309$$



## 19.5 base\_omegak\_CamSpecHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022515	$0.02252^{+0.00035}_{-0.00034}$ (+0.6 $\sigma$ )	$\mathcal{C}_{EE}$	1.0003	$0.9998^{+0.0084}_{-0.0083}$	$r_*$	144.87	$144.85^{+0.62}_{-0.63}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	0.11788	$0.1179^{+0.0029}_{-0.0029}$ (-0.3 $\sigma$ )	$\beta_1^1$	-0.32	$-0.1^{+1.9}_{-2.0}$	$100\theta_*$	1.04115	$1.04116^{+0.00058}_{-0.00060}$ (+0.1 $\sigma$ )
$100\theta_{MC}$	1.04098	$1.04098^{+0.00060}_{-0.00061}$ (+0.1 $\sigma$ )	$H_0$	56.8	$57^{+9}_{-8}$ (+0.3 $\sigma$ )	$z_{drag}$	1060.12	$1060.13^{+0.68}_{-0.69}$ (+0.6 $\sigma$ )
$\tau$	0.0548	$0.054^{+0.037}_{-0.042}$ (+0.0 $\sigma$ )	$\Omega_\Lambda$	0.594	$0.59^{+0.10}_{-0.11}$ (+0.3 $\sigma$ )	$r_{drag}$	147.49	$147.47^{+0.62}_{-0.61}$ (+0.1 $\sigma$ )
$\Omega_K$	-0.0322	$-0.036^{+0.034}_{-0.039}$ (+0.2 $\sigma$ )	$\Omega_m$	0.438	$0.45^{+0.15}_{-0.13}$ (-0.3 $\sigma$ )	$k_D$	0.14057	$0.14060^{+0.00066}_{-0.00066}$ (+0.2 $\sigma$ )
$\ln(10^{10} A_s)$	3.040	$3.037^{+0.076}_{-0.080}$ (-0.1 $\sigma$ )	$\Omega_m h^2$	0.14104	$0.1411^{+0.0027}_{-0.0027}$ (-0.3 $\sigma$ )	$100\theta_D$	0.160619	$0.16061^{+0.00039}_{-0.00039}$ (-0.7 $\sigma$ )
$n_s$	0.9713	$0.9712^{+0.0094}_{-0.0095}$ (+0.7 $\sigma$ )	$\Omega_m h^3$	0.0801	$0.080^{+0.013}_{-0.012}$ (+0.2 $\sigma$ )	$z_{eq}$	3355	$3357^{+65}_{-64}$ (-0.3 $\sigma$ )
$y_{cal}$	1.00090	$0.9999^{+0.0048}_{-0.0048}$ (-0.0 $\sigma$ )	$\sigma_8$	0.7852	$0.783^{+0.044}_{-0.048}$ (+0.0 $\sigma$ )	$100\theta_{eq}$	0.8223	$0.822^{+0.013}_{-0.012}$ (+0.3 $\sigma$ )
$A_{100}^{PS}$	238.4	$237^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.520	$0.522^{+0.058}_{-0.053}$ (-0.4 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.0634	$0.0633^{+0.0066}_{-0.0061}$ (+0.3 $\sigma$ )
$A_{143}^{PS}$	39.2	$35^{+10}_{-20}$ (-0.7 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6387	$0.639^{+0.025}_{-0.026}$ (-0.6 $\sigma$ )	$H(0.57)$	84.4	$84.3^{+6.8}_{-6.7}$ (+0.2 $\sigma$ )
$A_{217}^{PS}$	103.2	$101^{+30}_{-30}$ (+0.2 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0422	$1.042^{+0.041}_{-0.042}$ (-0.5 $\sigma$ )	$D_A(0.57)$	1587	$1597^{+200}_{-200}$ (-0.3 $\sigma$ )
$A_{217}^{CIB}$	42.8	$43^{+10}_{-10}$ (-2.8 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.603	$2.61^{+0.13}_{-0.12}$ (-0.5 $\sigma$ )	$F_{AP}(0.57)$	0.7014	$0.703^{+0.026}_{-0.025}$ (-0.3 $\sigma$ )
$A_{143}^{tSZ}$	3.69	< 7.18 (-1.0 $\sigma$ )	$z_{re}$	7.55	$7.4^{+3.9}_{-4.3}$ (+0.0 $\sigma$ )	$f\sigma_8(0.57)$	0.4836	$0.482^{+0.016}_{-0.016}$ (-0.3 $\sigma$ )
$r_{143 \times 217}^{PS}$	0.583	$0.53^{+0.24}_{-0.23}$	$10^9 A_s$	2.090	$2.09^{+0.16}_{-0.16}$ (-0.1 $\sigma$ )	$\sigma_8(0.57)$	0.558	$0.555^{+0.052}_{-0.056}$ (+0.1 $\sigma$ )
$\xi^{tSZ \times CIB}$	0.65	—	$10^9 A_s e^{-2\tau}$	1.8731	$1.869^{+0.023}_{-0.023}$ (-0.6 $\sigma$ )	$Y_P^{BBN}$	0.246367	$0.24637^{+0.00015}_{-0.00015}$ (-4.9 $\sigma$ )
$A^{kSZ}$	4.0	—	$D_{40}$	1208.1	$1206^{+30}_{-29}$ (-0.7 $\sigma$ )	$f_{2000}^{143}$	26.4	$26^{+5}_{-6}$ (-0.4 $\sigma$ )
$A_{100}^{dust}$	0.978	$0.99^{+0.38}_{-0.39}$	$D_{220}$	5736	$5725^{+74}_{-74}$ (-0.5 $\sigma$ )	$f_{2000}^{217}$	104.47	$104.4^{+3.8}_{-3.9}$ (+0.1 $\sigma$ )
$A_{143}^{dust}$	1.005	$1.02^{+0.36}_{-0.36}$	$D_{810}$	2533.0	$2526^{+26}_{-27}$ (-0.3 $\sigma$ )	$f_{2000}^{143 \times 217}$	29.55	$29^{+4}_{-4}$ (-0.5 $\sigma$ )
$A_{217}^{dust}$	1.218	$1.23^{+0.22}_{-0.23}$	$D_{1420}$	815.7	$813.8^{+9.1}_{-9.5}$ (+0.1 $\sigma$ )	$\chi_{lowTEB}^2$	10493.35	$10494.4 (\nu: 0.8)$ (-0.4 $\sigma$ )
$A_{143 \times 217}^{dust}$	0.968	$0.97^{+0.34}_{-0.35}$	$n_{s,0.002}$	0.9713	$0.9712^{+0.0094}_{-0.0095}$ (+0.7 $\sigma$ )	$\chi_{CamSpec}^2$	12934.4	$12950.7 (\nu: 17.4)$
$c_{100}$	0.99696	$0.9969^{+0.0019}_{-0.0019}$ (-1.7 $\sigma$ )	$Y_P$	0.245037	$0.24504^{+0.00015}_{-0.00015}$ (-4.9 $\sigma$ )	$\chi_{prior}^2$	3.0	$8.7 (\nu: 6.0)$ (-1.9 $\sigma$ )
$c_{217}$	0.99654	$0.9967^{+0.0035}_{-0.0035}$ (+0.7 $\sigma$ )	Age/Gyr	15.01	$15.1^{+1.1}_{-1.0}$ (-0.2 $\sigma$ )	$\chi_{CMB}^2$	23427.7	$23445.2 (\nu: 18.0)$ (+1553.1 $\sigma$ )
$c_{TE}$	1.0020	$1.0019^{+0.0089}_{-0.0090}$	$z_*$	1089.54	$1089.53^{+0.62}_{-0.61}$ (-0.6 $\sigma$ )			

Best-fit  $\chi_{eff}^2 = 23430.74$ ;  $\Delta\chi_{eff}^2 = 10501.82$ ;  $\bar{\chi}_{eff}^2 = 23453.88$ ;  $\Delta\bar{\chi}_{eff}^2 = 10491.54$ ;  $R - 1 = 0.01948$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.35 ( $\Delta$  -0.53) CamSpec like\_v9.10CMH\_unified: 12934.35

## 19.6 base\_omegak\_CamSpecHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02253^{+0.00034}_{-0.00033}$	$c_{EE}$	$0.9998^{+0.0085}_{-0.0083}$	$r_*$	$144.87^{+0.62}_{-0.64}$
$\Omega_c h^2$	$0.1178^{+0.0029}_{-0.0029}$	$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.04116^{+0.00060}_{-0.00060}$
$100\theta_{MC}$	$1.04099^{+0.00061}_{-0.00062}$	$H_0$	$58^{+8}_{-8}$	$z_{drag}$	$1060.14^{+0.71}_{-0.66}$
$\tau$	$< 0.0922$	$\Omega_\Lambda$	$0.606^{+0.084}_{-0.089}$	$r_{drag}$	$147.49^{+0.62}_{-0.63}$
$\Omega_K$	$-0.029^{+0.028}_{-0.031}$	$\Omega_m$	$0.42^{+0.12}_{-0.11}$	$k_D$	$0.14059^{+0.00068}_{-0.00066}$
$\ln(10^{10} A_s)$	$3.059^{+0.055}_{-0.049}$	$\Omega_m h^2$	$0.1410^{+0.0027}_{-0.0027}$	$100\theta_D$	$0.16060^{+0.00038}_{-0.00039}$
$n_s$	$0.9718^{+0.0093}_{-0.0093}$	$\Omega_m h^3$	$0.082^{+0.012}_{-0.011}$	$z_{eq}$	$3354^{+64}_{-64}$
$y_{cal}$	$0.9999^{+0.0048}_{-0.0049}$	$\sigma_8$	$0.795^{+0.035}_{-0.033}$	$100\theta_{eq}$	$0.822^{+0.013}_{-0.012}$
$A_{100}^{PS}$	$236^{+40}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	$0.515^{+0.054}_{-0.051}$	$r_{drag}/D_V(0.57)$	$0.0644^{+0.0059}_{-0.0060}$
$A_{143}^{PS}$	$35^{+20}_{-10}$	$\sigma_8 \Omega_m^{0.25}$	$0.640^{+0.027}_{-0.026}$	$H(0.57)$	$85.4^{+6.2}_{-6.2}$
$A_{217}^{PS}$	$101^{+30}_{-20}$	$\sigma_8/h^{0.5}$	$1.044^{+0.041}_{-0.043}$	$D_A(0.57)$	$1563^{+160}_{-150}$
$A_{217}^{CIB}$	$43^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	$2.60^{+0.13}_{-0.12}$	$F_{AP}(0.57)$	$0.698^{+0.023}_{-0.020}$
$A_{143}^{tSZ}$	$< 7.29$	$z_{re}$	$< 10.9$	$f\sigma_8(0.57)$	$0.486^{+0.013}_{-0.012}$
$r_{143 \times 217}^{PS}$	$0.53^{+0.24}_{-0.23}$	$10^9 A_s$	$2.13^{+0.12}_{-0.11}$	$\sigma_8(0.57)$	$0.568^{+0.044}_{-0.043}$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.868^{+0.023}_{-0.023}$	$Y_P^{BBN}$	$0.24637^{+0.00014}_{-0.00014}$
$A^{kSZ}$	—	$D_{40}$	$1209^{+29}_{-29}$	$f_{2000}^{143}$	$26^{+6}_{-6}$
$A_{100}^{dust}$	$0.99^{+0.37}_{-0.39}$	$D_{220}$	$5723^{+75}_{-77}$	$f_{2000}^{217}$	$104.3^{+3.8}_{-3.8}$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.35}$	$D_{810}$	$2526^{+25}_{-26}$	$f_{2000}^{143 \times 217}$	$29^{+4}_{-4}$
$A_{217}^{dust}$	$1.23^{+0.22}_{-0.23}$	$D_{1420}$	$813.9^{+9.1}_{-9.3}$	$\chi_{lowTEB}^2$	$10494.1 (\nu: 0.7)$
$A_{143 \times 217}^{dust}$	$0.97^{+0.34}_{-0.35}$	$n_{s,0.002}$	$0.9718^{+0.0093}_{-0.0093}$	$\chi_{CamSpec}^2$	$12950.8 (\nu: 17.6)$
$c_{100}$	$0.9969^{+0.0019}_{-0.0019}$	$Y_P$	$0.24504^{+0.00015}_{-0.00014}$	$\chi_{prior}^2$	$8.7 (\nu: 6.0)$
$c_{217}$	$0.9967^{+0.0035}_{-0.0035}$	$Age/Gyr$	$14.87^{+0.96}_{-0.93}$	$\chi_{CMB}^2$	$23444.9 (\nu: 18.2)$
$c_{TE}$	$1.0017^{+0.0091}_{-0.0093}$	$z_*$	$1089.51^{+0.60}_{-0.60}$		

$$\bar{\chi}_{eff}^2 = 23453.57; R - 1 = 0.02472$$

## 19.7 base\_omegak\_plikHM\_TT\_lowTEB\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022279	$0.02230^{+0.00047}_{-0.00050}$	$\Omega_m h^2$	0.14172	$0.1418^{+0.0043}_{-0.0042}$	$r_{\text{drag}}$	147.51	$147.47^{+0.97}_{-0.97}$
$\Omega_c h^2$	0.11880	$0.1189^{+0.0045}_{-0.0045}$	$\Omega_m h^3$	0.09584	$0.0959^{+0.0037}_{-0.0035}$	$k_D$	0.14036	$0.1404^{+0.0010}_{-0.0010}$
$100\theta_{\text{MC}}$	1.04098	$1.04098^{+0.00096}_{-0.0010}$	$\sigma_8$	0.8277	$0.829^{+0.030}_{-0.030}$	$100\theta_D$	0.16093	$0.16090^{+0.00056}_{-0.00053}$
$\tau$	0.0801	$0.081^{+0.038}_{-0.039}$	$\sigma_8 \Omega_m^{0.5}$	0.4608	$0.461^{+0.021}_{-0.020}$	$z_{\text{eq}}$	3371	$3374^{+100}_{-100}$
$\Omega_K$	-0.0002	$-0.0002^{+0.0053}_{-0.0051}$	$\sigma_8 \Omega_m^{0.25}$	0.6176	$0.618^{+0.024}_{-0.023}$	$k_{\text{eq}}$	0.010289	$0.01030^{+0.00031}_{-0.00031}$
$\ln(10^{10} A_s)$	3.092	$3.094^{+0.074}_{-0.075}$	$\sigma_8/h^{0.5}$	1.0065	$1.008^{+0.036}_{-0.036}$	$100\theta_{\text{eq}}$	0.8187	$0.818^{+0.020}_{-0.019}$
$n_s$	0.9676	$0.968^{+0.013}_{-0.013}$	$\langle d^2 \rangle^{1/2}$	2.489	$2.491^{+0.086}_{-0.087}$	$100\theta_{s,\text{eq}}$	0.4522	$0.452^{+0.010}_{-0.0099}$
$y_{\text{cal}}$	1.00038	$1.0004^{+0.0049}_{-0.0048}$	$z_{\text{re}}$	10.15	$10.1^{+3.5}_{-3.5}$	$r_{\text{drag}}/D_V(0.57)$	0.07165	$0.0716^{+0.0011}_{-0.0011}$
$A_{217}^{\text{CIB}}$	67.3	$64^{+10}_{-10}$	$10^9 A_s$	2.202	$2.21^{+0.17}_{-0.16}$	$H(0.57)$	92.96	$93.0^{+1.5}_{-1.4}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$10^9 A_s e^{-2\tau}$	1.8760	$1.877^{+0.027}_{-0.028}$	$D_A(0.57)$	1387.7	$1388^{+24}_{-24}$
$A_{143}^{\text{tSZ}}$	7.11	$5.2^{+3.7}_{-3.8}$	$D_{40}$	1231.8	$1233^{+31}_{-31}$	$F_{\text{AP}}(0.57)$	0.67559	$0.6757^{+0.0040}_{-0.0038}$
$A_{100}^{\text{PS}}$	254	$257^{+50}_{-50}$	$D_{220}$	5719	$5723^{+82}_{-82}$	$f\sigma_8(0.57)$	0.4809	$0.481^{+0.018}_{-0.017}$
$A_{143}^{\text{PS}}$	38.9	$43^{+20}_{-20}$	$D_{810}$	2533.4	$2534^{+27}_{-27}$	$\sigma_8(0.57)$	0.6162	$0.617^{+0.023}_{-0.023}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$D_{1420}$	814.7	$815.0^{+9.7}_{-9.8}$	$f_{2000}^{143}$	29.7	$30^{+6}_{-6}$
$A_{217}^{\text{PS}}$	96.9	$97^{+20}_{-20}$	$D_{2000}$	230.53	$230.6^{+3.8}_{-3.7}$	$f_{2000}^{143 \times 217}$	32.26	$32^{+4}_{-4}$
$A^{\text{kSZ}}$	0.00	$< 8.25$	$n_{s,0.002}$	0.9676	$0.968^{+0.013}_{-0.013}$	$f_{2000}^{217}$	105.90	$105.7^{+4.1}_{-4.1}$
$A_{100}^{\text{dustTT}}$	7.43	$7.4^{+3.7}_{-3.7}$	$Y_{\text{P}}$	0.245353	$0.24536^{+0.00021}_{-0.00023}$	$\chi_{\text{lowTEB}}^2$	10496.20	$10497.3 (\nu: 3.2)$
$A_{143}^{\text{dustTT}}$	9.05	$9.0^{+3.6}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.246679	$0.24669^{+0.00021}_{-0.00023}$	$\chi_{\text{plik}}^2$	763.7	$777.6 (\nu: 16.7)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.1^{+8.2}_{-8.2}$	$10^5 D/H$	2.608	$2.605^{+0.096}_{-0.089}$	$\chi_{6\text{DF}}^2$	0.022	$0.075 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	Age/Gyr	13.809	$13.81^{+0.20}_{-0.20}$	$\chi_{\text{MGS}}^2$	1.28	$1.34 (\nu: 0.2)$
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1089.93	$1089.91^{+0.93}_{-0.88}$	$\chi_{\text{DR11CMass}}^2$	2.47	$3.2 (\nu: 0.7)$
$c_{217}$	0.99599	$0.9959^{+0.0028}_{-0.0028}$	$r_*$	144.81	$144.8^{+1.0}_{-0.99}$	$\chi_{\text{DR11LOWZ}}^2$	0.62	$0.83 (\nu: 0.3)$
$H_0$	67.63	$67.6^{+1.4}_{-1.4}$	$100\theta_*$	1.04116	$1.04117^{+0.00094}_{-0.00098}$	$\chi_{\text{prior}}^2$	2.0	$7.3 (\nu: 6.2)$
$\Omega_\Lambda$	0.6903	$0.690^{+0.015}_{-0.017}$	$D_A/\text{Gpc}$	13.909	$13.905^{+0.092}_{-0.090}$	$\chi_{\text{CMB}}^2$	11259.9	$11274.8 (\nu: 16.0)$
$\Omega_m$	0.3099	$0.310^{+0.016}_{-0.015}$	$z_{\text{drag}}$	1059.63	$1059.69^{+0.93}_{-0.98}$	$\chi_{\text{BAO}}^2$	4.38	$5.4 (\nu: 1.3)$

Best-fit  $\chi_{\text{eff}}^2 = 11266.31$ ;  $\bar{\chi}_{\text{eff}}^2 = 11287.59$ ;  $R - 1 = 0.00885$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.02 MGS: 1.28 DR11CMass: 2.47 DR11LOWZ: 0.61 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.20 plik\_dx11dr2\_HM\_v18\_TT: 763.72

## 19.8 base\_omegak\_plikHM\_TT\_lowTEB\_BAO\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022269	$0.02227^{+0.00047}_{-0.00047}$	$\Omega_m h^3$	0.09563	$0.0958^{+0.0037}_{-0.0036}$	$100\theta_D$	0.16097	$0.16096^{+0.00055}_{-0.00052}$
$\Omega_c h^2$	0.11830	$0.1185^{+0.0042}_{-0.0044}$	$\sigma_8$	0.8149	$0.814^{+0.019}_{-0.019}$	$z_{\text{eq}}$	3359	$3364^{+94}_{-98}$
$100\theta_{\text{MC}}$	1.04106	$1.04102^{+0.00094}_{-0.00099}$	$\sigma_8 \Omega_m^{0.5}$	0.4522	$0.452^{+0.013}_{-0.013}$	$k_{\text{eq}}$	0.010252	$0.01027^{+0.00029}_{-0.00030}$
$\tau$	0.0673	$0.066^{+0.029}_{-0.029}$	$\sigma_8 \Omega_m^{0.25}$	0.6070	$0.607^{+0.015}_{-0.014}$	$100\theta_{\text{eq}}$	0.8209	$0.820^{+0.019}_{-0.018}$
$\Omega_K$	-0.0004	$-0.0002^{+0.0053}_{-0.0052}$	$\sigma_8/h^{0.5}$	0.9903	$0.989^{+0.022}_{-0.021}$	$100\theta_{\text{s,eq}}$	0.4534	$0.4530^{+0.0099}_{-0.0093}$
$\ln(10^{10} A_s)$	3.064	$3.062^{+0.051}_{-0.053}$	$\langle d^2 \rangle^{1/2}$	2.449	$2.447^{+0.051}_{-0.050}$	$r_{\text{drag}}/D_V(0.57)$	0.07175	$0.0718^{+0.0011}_{-0.0011}$
$n_s$	0.9686	$0.968^{+0.013}_{-0.012}$	$z_{\text{re}}$	8.95	$8.7^{+2.7}_{-2.8}$	$H(0.57)$	92.94	$93.0^{+1.5}_{-1.4}$
$y_{\text{cal}}$	1.00011	$1.0002^{+0.0048}_{-0.0049}$	$10^9 A_s$	2.142	$2.14^{+0.11}_{-0.11}$	$D_A(0.57)$	1386.9	$1386^{+25}_{-25}$
$A_{217}^{\text{CIB}}$	67.6	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8721	$1.874^{+0.027}_{-0.027}$	$F_{\text{AP}}(0.57)$	0.67505	$0.6752^{+0.0038}_{-0.0037}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1223.0	$1225^{+28}_{-28}$	$f\sigma_8(0.57)$	0.4730	$0.473^{+0.011}_{-0.011}$
$A_{143}^{\text{tSZ}}$	7.18	$5.1^{+3.7}_{-3.8}$	$D_{220}$	5714	$5719^{+81}_{-80}$	$\sigma_8(0.57)$	0.6071	$0.607^{+0.016}_{-0.016}$
$A_{100}^{\text{PS}}$	255	$260^{+50}_{-50}$	$D_{810}$	2531.7	$2532^{+26}_{-28}$	$f_{2000}^{143}$	30.1	$30^{+6}_{-6}$
$A_{143}^{\text{PS}}$	39.4	$44^{+20}_{-20}$	$D_{1420}$	814.5	$815^{+10}_{-9.9}$	$f_{2000}^{143 \times 217}$	32.63	$33^{+4}_{-4}$
$A_{143 \times 217}^{\text{PS}}$	33	$38^{+20}_{-20}$	$D_{2000}$	230.17	$230.1^{+3.5}_{-3.6}$	$f_{2000}^{217}$	106.14	$106.3^{+3.9}_{-4.0}$
$A_{217}^{\text{PS}}$	96.9	$96^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9686	$0.968^{+0.013}_{-0.012}$	$\chi^2_{\text{lensing}}$	9.24	$9.9 (\nu: 1.1)$
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.245348	$0.24535^{+0.00021}_{-0.00021}$	$\chi^2_{\text{lowTEB}}$	10494.74	$10495.5 (\nu: 1.0)$
$A_{100}^{\text{dustTT}}$	7.37	$7.5^{+3.8}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.246675	$0.24667^{+0.00021}_{-0.00021}$	$\chi^2_{\text{plik}}$	766.2	$779.7 (\nu: 15.2)$
$A_{143}^{\text{dustTT}}$	9.10	$9.1^{+3.6}_{-3.6}$	$10^5 \text{D/H}$	2.610	$2.611^{+0.092}_{-0.088}$	$\chi^2_{6\text{DF}}$	0.010	$0.060 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.3}_{-8.1}$	$\text{Age/Gyr}$	13.815	$13.81^{+0.20}_{-0.21}$	$\chi^2_{\text{MGS}}$	1.41	$1.49 (\nu: 0.2)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$z_*$	1089.90	$1089.92^{+0.89}_{-0.84}$	$\chi^2_{\text{DR11CMass}}$	2.43	$3.1 (\nu: 0.6)$
$c_{100}$	0.99791	$0.9979^{+0.0016}_{-0.0015}$	$r_*$	144.95	$144.90^{+0.98}_{-0.91}$	$\chi^2_{\text{DR11LOWZ}}$	0.49	$0.68 (\nu: 0.2)$
$c_{217}$	0.99598	$0.9960^{+0.0028}_{-0.0028}$	$100\theta_*$	1.04125	$1.04122^{+0.00092}_{-0.00097}$	$\chi^2_{\text{prior}}$	2.1	$7.4 (\nu: 6.3)$
$H_0$	67.72	$67.7^{+1.5}_{-1.4}$	$D_A/\text{Gpc}$	13.921	$13.916^{+0.088}_{-0.083}$	$\chi^2_{\text{CMB}}$	11270.1	$11285.1 (\nu: 15.4)$
$\Omega_\Lambda$	0.6925	$0.692^{+0.015}_{-0.015}$	$z_{\text{drag}}$	1059.59	$1059.60^{+0.91}_{-0.92}$	$\chi^2_{\text{BAO}}$	4.34	$5.4 (\nu: 1.1)$
$\Omega_m$	0.3079	$0.308^{+0.015}_{-0.014}$	$r_{\text{drag}}$	147.66	$147.60^{+0.96}_{-0.89}$			
$\Omega_m h^2$	0.14121	$0.1414^{+0.0039}_{-0.0041}$	$k_D$	0.14020	$0.14025^{+0.00095}_{-0.0010}$			

Best-fit  $\chi^2_{\text{eff}} = 11276.56$ ;  $\bar{\chi}^2_{\text{eff}} = 11297.85$ ;  $R - 1 = 0.02254$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.43 DR11LOWZ: 0.49 CMB - smica\_g30\_ftl\_full\_pp: 9.24 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.74 plik\_dx11dr2\_HM\_v18\_TT: 766.17

## 19.9 base\_omegak\_plikHM\_TTTEE\_lowTEB\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022314	$0.02229^{+0.00032}_{-0.00031}$	$A_{143}^{\text{dust}TE}$	0.154	$0.15^{+0.11}_{-0.10}$	$r_*$	144.70	$144.66^{+0.63}_{-0.63}$
$\Omega_c h^2$	0.11912	$0.1194^{+0.0030}_{-0.0029}$	$A_{143 \times 217}^{\text{dust}TE}$	0.336	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04102	$1.04102^{+0.00062}_{-0.00063}$
$100\theta_{\text{MC}}$	1.04083	$1.04082^{+0.00063}_{-0.00064}$	$A_{217}^{\text{dust}TE}$	1.662	$1.66^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	13.900	$13.896^{+0.059}_{-0.058}$
$\tau$	0.0855	$0.081^{+0.032}_{-0.033}$	$\mathbf{c}_{100}$	0.99821	$0.9982^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.74	$1059.70^{+0.63}_{-0.60}$
$\Omega_K$	-0.00005	$0.0002^{+0.0041}_{-0.0040}$	$\mathbf{c}_{217}$	0.99589	$0.9959^{+0.0029}_{-0.0028}$	$r_{\text{drag}}$	147.39	$147.35^{+0.62}_{-0.62}$
$\ln(10^{10} A_s)$	3.104	$3.097^{+0.062}_{-0.064}$	$H_0$	67.57	$67.6^{+1.4}_{-1.4}$	$k_D$	0.14051	$0.14053^{+0.00063}_{-0.00064}$
$n_s$	0.9669	$0.9657^{+0.0097}_{-0.0097}$	$\Omega_\Lambda$	0.6888	$0.688^{+0.012}_{-0.013}$	$100\theta_D$	0.160850	$0.16088^{+0.00036}_{-0.00035}$
$y_{\text{cal}}$	1.00018	$1.0004^{+0.0049}_{-0.0050}$	$\Omega_m$	0.3112	$0.312^{+0.014}_{-0.013}$	$z_{\text{eq}}$	3380	$3385^{+66}_{-65}$
$A_{217}^{\text{CIB}}$	65.1	$64^{+10}_{-10}$	$\Omega_m h^2$	0.14207	$0.1423^{+0.0028}_{-0.0027}$	$k_{\text{eq}}$	0.010315	$0.01033^{+0.00020}_{-0.00020}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.26	—	$\Omega_m h^3$	0.09599	$0.0962^{+0.0029}_{-0.0029}$	$100\theta_{\text{eq}}$	0.8171	$0.816^{+0.013}_{-0.012}$
$A_{143}^{\text{tSZ}}$	7.09	$5.4^{+3.6}_{-3.8}$	$\sigma_8$	0.8334	$0.831^{+0.026}_{-0.026}$	$100\theta_{s,\text{eq}}$	0.4514	$0.4509^{+0.0064}_{-0.0064}$
$A_{100}^{\text{PS}}$	253	$260^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4649	$0.464^{+0.017}_{-0.017}$	$r_{\text{drag}}/D_V(0.57)$	0.07158	$0.0716^{+0.0011}_{-0.0010}$
$A_{143}^{\text{PS}}$	41.5	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6224	$0.621^{+0.020}_{-0.020}$	$H(0.57)$	92.98	$93.0^{+1.3}_{-1.2}$
$A_{143 \times 217}^{\text{PS}}$	39.7	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0138	$1.011^{+0.031}_{-0.031}$	$D_A(0.57)$	1388.3	$1388^{+23}_{-23}$
$A_{217}^{\text{PS}}$	100.1	$98^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.507	$2.501^{+0.075}_{-0.076}$	$F_{\text{AP}}(0.57)$	0.67595	$0.6761^{+0.0034}_{-0.0033}$
$A^{\text{kSZ}}$	0.00	$< 7.79$	$z_{\text{re}}$	10.62	$10.2^{+2.9}_{-3.0}$	$f\sigma_8(0.57)$	0.4845	$0.483^{+0.015}_{-0.015}$
$A_{100}^{\text{dust}TT}$	7.38	$7.4^{+3.6}_{-3.7}$	$10^9 A_s$	2.229	$2.21^{+0.14}_{-0.14}$	$\sigma_8(0.57)$	0.6200	$0.618^{+0.020}_{-0.020}$
$A_{143}^{\text{dust}TT}$	8.94	$8.9^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8782	$1.880^{+0.024}_{-0.023}$	$f_{2000}^{143}$	28.6	$29^{+5}_{-5}$
$A_{143 \times 217}^{\text{dust}TT}$	17.7	$17.0^{+8.0}_{-8.1}$	$D_{40}$	1237.1	$1239^{+27}_{-27}$	$f_{2000}^{143 \times 217}$	31.72	$32^{+4}_{-4}$
$A_{217}^{\text{dust}TT}$	82.1	$82^{+10}_{-10}$	$D_{220}$	5727	$5731^{+76}_{-78}$	$f_{2000}^{217}$	105.26	$105.7^{+3.7}_{-3.6}$
$A_{100}^{\text{dust}EE}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{810}$	2534.6	$2535^{+26}_{-27}$	$\chi^2_{\text{lowTEB}}$	10497.29	$10497.7 (\nu: 2.5)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0491	$0.0490^{+0.0098}_{-0.0098}$	$D_{1420}$	814.9	$814.9^{+9.1}_{-9.4}$	$\chi^2_{\text{plik}}$	2431.1	$2450.5 (\nu: 22.8)$
$A_{100 \times 217}^{\text{dust}EE}$	0.0996	$0.099^{+0.064}_{-0.064}$	$D_{2000}$	230.82	$230.5^{+3.2}_{-3.2}$	$\chi^2_{6\text{DF}}$	0.034	$0.08 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1005	$0.100^{+0.013}_{-0.013}$	$n_{s,0.002}$	0.9669	$0.9657^{+0.0097}_{-0.0097}$	$\chi^2_{\text{MGS}}$	1.22	$1.26 (\nu: 0.2)$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.223^{+0.091}_{-0.091}$	$Y_P$	0.245368	$0.24535^{+0.00014}_{-0.00015}$	$\chi^2_{\text{DR11CMAS}}$	2.53	$3.2 (\nu: 0.7)$
$A_{217}^{\text{dust}EE}$	0.652	$0.65^{+0.25}_{-0.25}$	$Y_P^{\text{BBN}}$	0.246695	$0.24668^{+0.00014}_{-0.00015}$	$\chi^2_{\text{DR11LOWZ}}$	0.72	$0.90 (\nu: 0.3)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.074}_{-0.073}$	$10^5 \text{D/H}$	2.602	$2.607^{+0.060}_{-0.059}$	$\chi^2_{\text{prior}}$	6.8	$19.2 (\nu: 15.0)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.057}_{-0.057}$	Age/Gyr	13.804	$13.80^{+0.16}_{-0.17}$	$\chi^2_{\text{CMB}}$	12928.4	$12948.2 (\nu: 22.1)$
$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.16}_{-0.16}$	$z_*$	1089.91	$1089.97^{+0.61}_{-0.60}$	$\chi^2_{\text{BAO}}$	4.51	$5.4 (\nu: 1.4)$

Best-fit  $\chi^2_{\text{eff}} = 12939.67$ ;  $\bar{\chi}^2_{\text{eff}} = 12972.91$ ;  $R - 1 = 0.00709$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.03 MGS: 1.22 DR11CMAS: 2.53 DR11LOWZ: 0.72 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10497.29 plik\_dx11dr2\_HM\_v18\_TTTEE: 2431.05

# 19.10 base\_omegak\_plikHM\_TTTEEE\_lowTEB\_BAO\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022273	$0.02227^{+0.00032}_{-0.00029}$	$A_{143 \times 217}^{\text{dust}TE}$	0.339	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.901	$13.900^{+0.060}_{-0.059}$
$\Omega_c h^2$	0.11920	$0.1193^{+0.0030}_{-0.0030}$	$A_{217}^{\text{dust}TE}$	1.671	$1.66^{+0.48}_{-0.51}$	$z_{\text{drag}}$	1059.67	$1059.64^{+0.60}_{-0.58}$
$100\theta_{\text{MC}}$	1.04086	$1.04085^{+0.00059}_{-0.00063}$	$c_{100}$	0.99813	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.41	$147.41^{+0.64}_{-0.62}$
$\tau$	0.0645	$0.064^{+0.025}_{-0.024}$	$c_{217}$	0.99610	$0.9961^{+0.0027}_{-0.0029}$	$k_D$	0.14045	$0.14045^{+0.00066}_{-0.00065}$
$\Omega_K$	0.00043	$0.0004^{+0.0040}_{-0.0039}$	$H_0$	67.75	$67.7^{+1.4}_{-1.3}$	$100\theta_D$	0.160910	$0.16092^{+0.00034}_{-0.00034}$
$\ln(10^{10} A_s)$	3.0610	$3.060^{+0.045}_{-0.044}$	$\Omega_\Lambda$	0.6899	$0.689^{+0.012}_{-0.013}$	$z_{\text{eq}}$	3381	$3382^{+67}_{-67}$
$n_s$	0.9660	$0.9654^{+0.0094}_{-0.0094}$	$\Omega_m$	0.3097	$0.310^{+0.014}_{-0.013}$	$k_{\text{eq}}$	0.010318	$0.01032^{+0.00020}_{-0.00020}$
$y_{\text{cal}}$	0.99987	$1.0001^{+0.0047}_{-0.0052}$	$\Omega_m h^2$	0.14212	$0.1422^{+0.0028}_{-0.0028}$	$100\theta_{\text{eq}}$	0.8168	$0.817^{+0.013}_{-0.013}$
$A_{217}^{\text{CIB}}$	67.8	$64^{+10}_{-10}$	$\Omega_m h^3$	0.09628	$0.0963^{+0.0029}_{-0.0028}$	$100\theta_{s,\text{eq}}$	0.4513	$0.4512^{+0.0066}_{-0.0064}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.03	—	$\sigma_8$	0.8162	$0.816^{+0.018}_{-0.018}$	$r_{\text{drag}}/D_V(0.57)$	0.07173	$0.0717^{+0.0010}_{-0.0010}$
$A_{143}^{\text{tSZ}}$	7.18	$5.3^{+3.8}_{-3.9}$	$\sigma_8 \Omega_m^{0.5}$	0.4542	$0.454^{+0.012}_{-0.012}$	$H(0.57)$	93.13	$93.1^{+1.2}_{-1.3}$
$A_{100}^{\text{PS}}$	257	$262^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6088	$0.609^{+0.013}_{-0.012}$	$D_A(0.57)$	1385.3	$1386^{+22}_{-23}$
$A_{143}^{\text{PS}}$	39.1	$44^{+10}_{-20}$	$\sigma_8/h^{0.5}$	0.9916	$0.991^{+0.020}_{-0.019}$	$F_{\text{AP}}(0.57)$	0.67562	$0.6757^{+0.0034}_{-0.0032}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4533	$2.454^{+0.047}_{-0.047}$	$f\sigma_8(0.57)$	0.4740	$0.4739^{+0.0096}_{-0.0096}$
$A_{217}^{\text{PS}}$	96.5	$97^{+20}_{-20}$	$z_{\text{re}}$	8.70	$8.6^{+2.2}_{-2.4}$	$\sigma_8(0.57)$	0.6076	$0.607^{+0.015}_{-0.015}$
$A^{\text{kSZ}}$	0.0	—	$10^9 A_s$	2.135	$2.133^{+0.098}_{-0.092}$	$f_{2000}^{143}$	29.7	$30^{+5}_{-5}$
$A_{100}^{\text{dust}TT}$	7.37	$7.4^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8765	$1.878^{+0.023}_{-0.024}$	$f_{2000}^{143 \times 217}$	32.45	$32.7^{+3.6}_{-3.6}$
$A_{143}^{\text{dust}TT}$	9.07	$9.0^{+3.7}_{-3.6}$	$D_{40}$	1228.8	$1231^{+25}_{-25}$	$f_{2000}^{217}$	105.97	$106.3^{+3.6}_{-3.6}$
$A_{143 \times 217}^{\text{dust}TT}$	17.7	$17.3^{+8.4}_{-8.3}$	$D_{220}$	5719	$5726^{+73}_{-73}$	$\chi_{\text{lensing}}^2$	9.73	$10.3 (\nu: 1.5)$
$A_{217}^{\text{dust}TT}$	81.9	$82^{+10}_{-10}$	$D_{810}$	2533.2	$2534^{+25}_{-27}$	$\chi_{\text{lowTEB}}^2$	10495.32	$10495.9 (\nu: 0.8)$
$A_{100}^{\text{dust}EE}$	0.0815	$0.081^{+0.012}_{-0.011}$	$D_{1420}$	814.5	$814.6^{+9.1}_{-9.4}$	$\chi_{\text{plik}}^2$	2434.9	$2453.2 (\nu: 21.8)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0489	$0.0490^{+0.0099}_{-0.0096}$	$D_{2000}$	230.10	$230.0^{+3.1}_{-3.0}$	$\chi_{6\text{DF}}^2$	0.016	$0.062 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.098^{+0.065}_{-0.066}$	$n_{s,0.002}$	0.9660	$0.9654^{+0.0094}_{-0.0094}$	$\chi_{\text{MGS}}^2$	1.34	$1.40 (\nu: 0.2)$
$A_{143}^{\text{dust}EE}$	0.1004	$0.100^{+0.014}_{-0.013}$	$Y_P$	0.245350	$0.24534^{+0.00014}_{-0.00014}$	$\chi_{\text{DR11CMass}}^2$	2.39	$3.03 (\nu: 0.5)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.224^{+0.095}_{-0.090}$	$Y_P^{\text{BBN}}$	0.246676	$0.24667^{+0.00014}_{-0.00014}$	$\chi_{\text{DR11LOWZ}}^2$	0.54	$0.73 (\nu: 0.2)$
$A_{217}^{\text{dust}EE}$	0.651	$0.65^{+0.26}_{-0.25}$	$10^5 D/H$	2.610	$2.611^{+0.055}_{-0.060}$	$\chi_{\text{prior}}^2$	7.1	$19.5 (\nu: 16.1)$
$A_{100}^{\text{dust}TE}$	0.139	$0.142^{+0.076}_{-0.074}$	$\text{Age/Gyr}$	13.785	$13.79^{+0.17}_{-0.16}$	$\chi_{\text{CMB}}^2$	12940.0	$12959.4 (\nu: 21.6)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.060}_{-0.056}$	$z_*$	1089.97	$1089.99^{+0.58}_{-0.60}$	$\chi_{\text{BAO}}^2$	4.28	$5.2 (\nu: 1.0)$
$A_{100 \times 217}^{\text{dust}TE}$	0.301	$0.30^{+0.17}_{-0.17}$	$r_*$	144.71	$144.70^{+0.64}_{-0.64}$			
$A_{143}^{\text{dust}TE}$	0.156	$0.16^{+0.11}_{-0.10}$	$100\theta_*$	1.04106	$1.04104^{+0.00059}_{-0.00062}$			

Best-fit  $\chi_{\text{eff}}^2 = 12951.33$ ;  $\bar{\chi}_{\text{eff}}^2 = 12984.11$ ;  $R - 1 = 0.03333$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.02 MGS: 1.34 DR11CMass: 2.39 DR11LOWZ: 0.54 CMB - smica\_g30\_ftl\_full\_pp: 9.73 lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.33 plik\_dx11dr2\_HM\_v18\_TTT

## 19.11 base\_omegak\_plikHM\_TT\_lowTEB\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022336	$0.02230^{+0.00048}_{-0.00047}$	$\Omega_m h^2$	0.14157	$0.1417^{+0.0044}_{-0.0041}$	$100\theta_D$	0.16088	$0.16091^{+0.00054}_{-0.00053}$
$\Omega_c h^2$	0.11859	$0.1188^{+0.0047}_{-0.0044}$	$\Omega_m h^3$	0.09607	$0.0961^{+0.0038}_{-0.0037}$	$z_{\text{eq}}$	3368	$3372^{+100}_{-98}$
$100\theta_{\text{MC}}$	1.04107	$1.04099^{+0.00097}_{-0.00095}$	$\sigma_8$	0.8289	$0.829^{+0.030}_{-0.030}$	$k_{\text{eq}}$	0.010278	$0.01029^{+0.00032}_{-0.00030}$
$\tau$	0.0822	$0.081^{+0.038}_{-0.038}$	$\sigma_8 \Omega_m^{0.5}$	0.4596	$0.460^{+0.020}_{-0.019}$	$100\theta_{\text{eq}}$	0.8196	$0.819^{+0.019}_{-0.020}$
$\Omega_K$	0.0000	$0.0001^{+0.0055}_{-0.0050}$	$\sigma_8 \Omega_m^{0.25}$	0.6172	$0.618^{+0.023}_{-0.023}$	$100\theta_{\text{s,eq}}$	0.4527	$0.4523^{+0.0098}_{-0.010}$
$\ln(10^{10} A_s)$	3.096	$3.095^{+0.073}_{-0.072}$	$\sigma_8/h^{0.5}$	1.0062	$1.007^{+0.035}_{-0.036}$	$r_{\text{drag}}/D_V(0.57)$	0.07181	$0.0718^{+0.0011}_{-0.0010}$
$n_s$	0.9683	$0.968^{+0.013}_{-0.013}$	$\langle d^2 \rangle^{1/2}$	2.488	$2.489^{+0.084}_{-0.086}$	$H(0.57)$	93.11	$93.1^{+1.5}_{-1.4}$
$y_{\text{cal}}$	1.00055	$1.0004^{+0.0048}_{-0.0050}$	$z_{\text{re}}$	10.31	$10.2^{+3.4}_{-3.5}$	$D_A(0.57)$	1384.2	$1385^{+23}_{-24}$
$\alpha_{JLA}$	0.1411	$0.141^{+0.013}_{-0.013}$	$10^9 A_s$	2.211	$2.21^{+0.16}_{-0.16}$	$F_{\text{AP}}(0.57)$	0.67498	$0.6752^{+0.0038}_{-0.0037}$
$\beta_{JLA}$	3.099	$3.10^{+0.16}_{-0.15}$	$10^9 A_s e^{-2\tau}$	1.8760	$1.876^{+0.028}_{-0.028}$	$f\sigma_8(0.57)$	0.4809	$0.481^{+0.017}_{-0.017}$
$A_{217}^{\text{CIB}}$	67.0	$64^{+10}_{-10}$	$D_{40}$	1231.6	$1233^{+31}_{-31}$	$\sigma_8(0.57)$	0.6176	$0.618^{+0.023}_{-0.023}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$D_{220}$	5726	$5723^{+81}_{-81}$	$f_{2000}^{143}$	29.3	$30^{+6}_{-6}$
$A_{143}^{\text{tSZ}}$	7.18	$5.2^{+3.7}_{-3.8}$	$D_{810}$	2534.5	$2533^{+28}_{-28}$	$f_{2000}^{143 \times 217}$	31.98	$32^{+4}_{-4}$
$A_{100}^{\text{PS}}$	253	$257^{+50}_{-50}$	$D_{1420}$	815.5	$815.1^{+9.9}_{-10}$	$f_{2000}^{217}$	105.67	$105.7^{+4.1}_{-4.1}$
$A_{143}^{\text{PS}}$	38.0	$43^{+20}_{-20}$	$D_{2000}$	230.93	$230.6^{+3.7}_{-3.7}$	$\chi^2_{\text{lowTEB}}$	10496.39	$10497.3 (\nu: 3.2)$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9683	$0.968^{+0.013}_{-0.013}$	$\chi^2_{\text{plik}}$	763.4	$777.6 (\nu: 16.6)$
$A_{217}^{\text{PS}}$	97.0	$97^{+20}_{-20}$	$Y_{\text{P}}$	0.245378	$0.24536^{+0.00021}_{-0.00022}$	$\chi^2_{\text{H070p6}}$	0.68	$0.75 (\nu: 0.1)$
$A^{\text{kSZ}}$	0.00	$< 8.23$	$Y_{\text{P}}^{\text{BBN}}$	0.246704	$0.24669^{+0.00021}_{-0.00022}$	$\chi^2_{\text{JLA}}$	695.21	$697.3 (\nu: 2.1)$
$A_{100}^{\text{dustTT}}$	7.35	$7.4^{+3.7}_{-3.7}$	$10^5 \text{D}/\text{H}$	2.598	$2.604^{+0.092}_{-0.089}$	$\chi^2_{6\text{DF}}$	0.006	$0.055 (\nu: 0.0)$
$A_{143}^{\text{dustTT}}$	9.02	$9.0^{+3.6}_{-3.6}$	$\text{Age}/\text{Gyr}$	13.791	$13.79^{+0.19}_{-0.21}$	$\chi^2_{\text{MGS}}$	1.47	$1.49 (\nu: 0.2)$
$A_{143 \times 217}^{\text{dustTT}}$	17.4	$17.1^{+8.1}_{-8.2}$	$z_*$	1089.84	$1089.90^{+0.91}_{-0.88}$	$\chi^2_{\text{DR11CMAS}}$	2.41	$3.05 (\nu: 0.4)$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$r_*$	144.82	$144.80^{+0.98}_{-1.0}$	$\chi^2_{\text{DR11LOWZ}}$	0.43	$0.65 (\nu: 0.2)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04127	$1.04119^{+0.00094}_{-0.00093}$	$\chi^2_{\text{prior}}$	2.1	$7.3 (\nu: 6.2)$
$c_{217}$	0.99592	$0.9959^{+0.0028}_{-0.0029}$	$D_A/\text{Gpc}$	13.908	$13.907^{+0.090}_{-0.093}$	$\chi^2_{\text{CMB}}$	11259.8	$11274.9 (\nu: 15.6)$
$H_0$	67.86	$67.8^{+1.4}_{-1.4}$	$z_{\text{drag}}$	1059.74	$1059.69^{+0.97}_{-0.94}$	$\chi^2_{\text{BAO}}$	4.31	$5.2 (\nu: 0.9)$
$\Omega_\Lambda$	0.6926	$0.691^{+0.015}_{-0.016}$	$r_{\text{drag}}$	147.51	$147.49^{+0.96}_{-0.99}$			
$\Omega_m$	0.3074	$0.308^{+0.015}_{-0.014}$	$k_D$	0.14040	$0.1404^{+0.0010}_{-0.0010}$			

Best-fit  $\chi^2_{\text{eff}} = 11962.09$ ;  $\bar{\chi}^2_{\text{eff}} = 11985.52$ ;  $R - 1 = 0.00926$ 

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMAS: 2.41 DR11LOWZ: 0.43 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.39 plik\_dx11dr2\_HM\_v18\_TT: 763.40  
Hubble - H070p6: 0.68 SN - JLA December\_2013: 695.21

## 19.12 base\_omegak\_plikHM\_TT\_lowTEB\_BAO\_H070p6\_JLA\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022318	$0.02228^{+0.00047}_{-0.00047}$	$\Omega_m h^2$	0.14107	$0.1413^{+0.0042}_{-0.0040}$	$100\theta_D$	0.16091	$0.16096^{+0.00052}_{-0.00052}$
$\Omega_c h^2$	0.11811	$0.1184^{+0.0045}_{-0.0043}$	$\Omega_m h^3$	0.09593	$0.0959^{+0.0039}_{-0.0035}$	$z_{\text{eq}}$	3356	$3361^{+100}_{-95}$
$100\theta_{\text{MC}}$	1.04105	$1.04105^{+0.00099}_{-0.00094}$	$\sigma_8$	0.8160	$0.815^{+0.019}_{-0.019}$	$k_{\text{eq}}$	0.010242	$0.01026^{+0.00031}_{-0.00029}$
$\tau$	0.0696	$0.067^{+0.028}_{-0.028}$	$\sigma_8 \Omega_m^{0.5}$	0.4507	$0.451^{+0.013}_{-0.013}$	$100\theta_{\text{eq}}$	0.8217	$0.821^{+0.019}_{-0.019}$
$\Omega_K$	0.0000	$-0.0001^{+0.0054}_{-0.0052}$	$\sigma_8 \Omega_m^{0.25}$	0.6065	$0.607^{+0.015}_{-0.014}$	$100\theta_{\text{s,eq}}$	0.4538	$0.4534^{+0.0098}_{-0.0099}$
$\ln(10^{10} A_s)$	3.068	$3.064^{+0.049}_{-0.051}$	$\sigma_8/h^{0.5}$	0.9896	$0.989^{+0.021}_{-0.021}$	$r_{\text{drag}}/D_V(0.57)$	0.07194	$0.0719^{+0.0010}_{-0.00099}$
$n_s$	0.9696	$0.968^{+0.012}_{-0.013}$	$\langle d^2 \rangle^{1/2}$	2.446	$2.447^{+0.050}_{-0.051}$	$H(0.57)$	93.14	$93.1^{+1.5}_{-1.4}$
$y_{\text{cal}}$	0.99971	$1.0001^{+0.0049}_{-0.0050}$	$z_{\text{re}}$	9.15	$8.9^{+2.7}_{-2.7}$	$D_A(0.57)$	1382.6	$1384^{+23}_{-24}$
$\alpha_{JLA}$	0.1411	$0.141^{+0.013}_{-0.013}$	$10^9 A_s$	2.150	$2.14^{+0.11}_{-0.11}$	$F_{\text{AP}}(0.57)$	0.67438	$0.6748^{+0.0036}_{-0.0036}$
$\beta_{JLA}$	3.100	$3.10^{+0.16}_{-0.15}$	$10^9 A_s e^{-2\tau}$	1.8702	$1.873^{+0.028}_{-0.027}$	$f\sigma_8(0.57)$	0.4728	$0.473^{+0.011}_{-0.011}$
$A_{217}^{\text{CIB}}$	66.8	$64^{+10}_{-10}$	$D_{40}$	1221.5	$1224^{+30}_{-29}$	$\sigma_8(0.57)$	0.6086	$0.608^{+0.016}_{-0.015}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.02	—	$D_{220}$	5710	$5718^{+79}_{-80}$	$f_{2000}^{143}$	29.4	$30^{+6}_{-6}$
$A_{143}^{\text{tSZ}}$	7.15	$5.1^{+3.8}_{-3.9}$	$D_{810}$	2530.7	$2532^{+28}_{-28}$	$f_{2000}^{143 \times 217}$	32.08	$33^{+4}_{-4}$
$A_{100}^{\text{PS}}$	251	$259^{+50}_{-50}$	$D_{1420}$	814.8	$814.7^{+9.9}_{-10}$	$f_{2000}^{217}$	105.72	$106.2^{+4.0}_{-4.1}$
$A_{143}^{\text{PS}}$	38.3	$44^{+10}_{-20}$	$D_{2000}$	230.39	$230.1^{+3.6}_{-3.6}$	$\chi^2_{\text{lensing}}$	9.20	$9.8 (\nu: 1.1)$
$A_{143 \times 217}^{\text{PS}}$	32	$38^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9696	$0.968^{+0.012}_{-0.013}$	$\chi^2_{\text{lowTEB}}$	10494.75	$10495.4 (\nu: 1.0)$
$A_{217}^{\text{PS}}$	97.2	$96^{+20}_{-20}$	$Y_{\text{P}}$	0.245370	$0.24535^{+0.00021}_{-0.00021}$	$\chi^2_{\text{plik}}$	765.9	$779.8 (\nu: 15.8)$
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}^{\text{BBN}}$	0.246696	$0.24668^{+0.00021}_{-0.00022}$	$\chi^2_{\text{H070p6}}$	0.61	$0.71 (\nu: 0.1)$
$A_{100}^{\text{dustTT}}$	7.52	$7.5^{+3.7}_{-3.6}$	$10^5 \text{D}/\text{H}$	2.601	$2.609^{+0.092}_{-0.088}$	$\chi^2_{\text{JLA}}$	695.16	$697.3 (\nu: 2.0)$
$A_{143}^{\text{dustTT}}$	9.05	$9.1^{+3.5}_{-3.5}$	$\text{Age}/\text{Gyr}$	13.793	$13.80^{+0.20}_{-0.20}$	$\chi^2_{6\text{DF}}$	0.000	$0.047 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.3^{+8.1}_{-8.1}$	$z_*$	1089.82	$1089.89^{+0.88}_{-0.86}$	$\chi^2_{\text{MGS}}$	1.68	$1.62 (\nu: 0.2)$
$A_{217}^{\text{dustTT}}$	82.2	$82^{+10}_{-10}$	$r_*$	144.96	$144.93^{+0.94}_{-0.99}$	$\chi^2_{\text{DR11CMass}}$	2.46	$3.04 (\nu: 0.4)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0016}$	$100\theta_*$	1.04124	$1.04125^{+0.00096}_{-0.00092}$	$\chi^2_{\text{DR11LOWZ}}$	0.29	$0.54 (\nu: 0.2)$
$c_{217}$	0.99600	$0.9960^{+0.0028}_{-0.0028}$	$D_A/\text{Gpc}$	13.922	$13.919^{+0.088}_{-0.091}$	$\chi^2_{\text{prior}}$	2.1	$7.4 (\nu: 6.2)$
$H_0$	68.00	$67.9^{+1.4}_{-1.3}$	$z_{\text{drag}}$	1059.67	$1059.61^{+0.94}_{-0.89}$	$\chi^2_{\text{CMB}}$	11269.9	$11285.1 (\nu: 15.8)$
$\Omega_\Lambda$	0.6950	$0.693^{+0.015}_{-0.015}$	$r_{\text{drag}}$	147.65	$147.63^{+0.93}_{-0.98}$	$\chi^2_{\text{BAO}}$	4.43	$5.2 (\nu: 0.8)$
$\Omega_m$	0.3051	$0.307^{+0.014}_{-0.014}$	$k_D$	0.14024	$0.1402^{+0.0010}_{-0.00096}$			

Best-fit  $\chi^2_{\text{eff}} = 11972.16$ ;  $\bar{\chi}^2_{\text{eff}} = 11995.77$ ;  $R - 1 = 0.02258$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.68 DR11CMass: 2.46 DR11LOWZ: 0.29 CMB - smica\_g30\_ft1\_full\_pp: 9.20 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.75 plik\_dx11dr2\_HM\_v18\_TT: 765.90 Hubble - H070p6: 0.61 SN - JLA December\_2013: 695.16



### 19.13 base\_omegak\_plikHM\_TTTEEE\_lowTEB\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022305	$0.02229^{+0.00032}_{-0.00031}$	$A_{143}^{\text{dust}TE}$	0.155	$0.15^{+0.11}_{-0.10}$	$D_A/\text{Gpc}$	13.902	$13.896^{+0.058}_{-0.058}$
$\Omega_c h^2$	0.11909	$0.1193^{+0.0029}_{-0.0029}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.16}_{-0.16}$	$z_{\text{drag}}$	1059.70	$1059.71^{+0.64}_{-0.60}$
$100\theta_{\text{MC}}$	1.04082	$1.04083^{+0.00064}_{-0.00062}$	$A_{217}^{\text{dust}TE}$	1.66	$1.67^{+0.50}_{-0.50}$	$r_{\text{drag}}$	147.41	$147.35^{+0.62}_{-0.62}$
$\tau$	0.0841	$0.082^{+0.032}_{-0.033}$	$c_{100}$	0.99819	$0.9982^{+0.0015}_{-0.0015}$	$k_D$	0.14049	$0.14053^{+0.00066}_{-0.00065}$
$\Omega_K$	0.00033	$0.0006^{+0.0039}_{-0.0039}$	$c_{217}$	0.99594	$0.9959^{+0.0029}_{-0.0028}$	$100\theta_D$	0.160862	$0.16087^{+0.00036}_{-0.00036}$
$\ln(10^{10} A_s)$	3.101	$3.097^{+0.063}_{-0.065}$	$H_0$	67.75	$67.8^{+1.3}_{-1.3}$	$z_{\text{eq}}$	3379	$3385^{+65}_{-65}$
$n_s$	0.9669	$0.9657^{+0.0093}_{-0.0095}$	$\Omega_\Lambda$	0.6902	$0.690^{+0.012}_{-0.012}$	$k_{\text{eq}}$	0.010312	$0.01033^{+0.00020}_{-0.00020}$
$y_{\text{cal}}$	1.00033	$1.0004^{+0.0048}_{-0.0048}$	$\Omega_m$	0.3094	$0.310^{+0.013}_{-0.012}$	$100\theta_{\text{eq}}$	0.8172	$0.816^{+0.013}_{-0.012}$
$\alpha_{JLA}$	0.1412	$0.141^{+0.013}_{-0.013}$	$\Omega_m h^2$	0.14204	$0.1423^{+0.0027}_{-0.0027}$	$100\theta_{s,\text{eq}}$	0.4515	$0.4510^{+0.0065}_{-0.0063}$
$\beta_{JLA}$	3.099	$3.10^{+0.16}_{-0.16}$	$\Omega_m h^3$	0.09623	$0.0964^{+0.0028}_{-0.0027}$	$r_{\text{drag}}/D_V(0.57)$	0.07172	$0.07174^{+0.00098}_{-0.00096}$
$A_{217}^{\text{CIB}}$	65.1	$64^{+10}_{-10}$	$\sigma_8$	0.8324	$0.831^{+0.026}_{-0.027}$	$H(0.57)$	93.12	$93.2^{+1.2}_{-1.2}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.26	—	$\sigma_8 \Omega_m^{0.5}$	0.4630	$0.463^{+0.017}_{-0.017}$	$D_A(0.57)$	1385.3	$1385^{+21}_{-21}$
$A_{143}^{\text{tSZ}}$	7.04	$5.4^{+3.6}_{-3.7}$	$\sigma_8 \Omega_m^{0.25}$	0.6208	$0.620^{+0.020}_{-0.021}$	$F_{\text{AP}}(0.57)$	0.67555	$0.6757^{+0.0032}_{-0.0030}$
$A_{100}^{\text{PS}}$	253	$260^{+50}_{-50}$	$\sigma_8/h^{0.5}$	1.0113	$1.010^{+0.032}_{-0.033}$	$f\sigma_8(0.57)$	0.4834	$0.483^{+0.015}_{-0.016}$
$A_{143}^{\text{PS}}$	41.9	$43^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.501	$2.498^{+0.076}_{-0.077}$	$\sigma_8(0.57)$	0.6198	$0.619^{+0.020}_{-0.020}$
$A_{143 \times 217}^{\text{PS}}$	39.9	$40^{+20}_{-20}$	$z_{\text{re}}$	10.50	$10.2^{+2.9}_{-3.0}$	$f_{2000}^{143}$	28.8	$29^{+5}_{-5}$
$A_{217}^{\text{PS}}$	100.5	$98^{+20}_{-20}$	$10^9 A_s$	2.223	$2.21^{+0.14}_{-0.14}$	$f_{2000}^{143 \times 217}$	31.86	$32^{+4}_{-4}$
$A^{\text{kSZ}}$	0.00	$< 7.85$	$10^9 A_s e^{-2\tau}$	1.8787	$1.880^{+0.023}_{-0.024}$	$f_{2000}^{217}$	105.44	$105.7^{+3.7}_{-3.6}$
$A_{100}^{\text{dust}TT}$	7.39	$7.4^{+3.7}_{-3.7}$	$D_{40}$	1236.7	$1239^{+27}_{-26}$	$\chi_{\text{lowTEB}}^2$	10497.10	$10497.8 (\nu: 2.7)$
$A_{143}^{\text{dust}TT}$	8.93	$8.9^{+3.6}_{-3.6}$	$D_{220}$	5727	$5732^{+75}_{-75}$	$\chi_{\text{plik}}^2$	2431.9	$2450.9 (\nu: 23.7)$
$A_{143 \times 217}^{\text{dust}TT}$	17.8	$16.9^{+8.1}_{-8.2}$	$D_{810}$	2535.3	$2535^{+26}_{-26}$	$\chi_{\text{H070p6}}^2$	0.73	$0.76 (\nu: 0.1)$
$A_{217}^{\text{dust}TT}$	82.3	$82^{+10}_{-10}$	$D_{1420}$	815.2	$814.9^{+9.4}_{-9.1}$	$\chi_{\text{JLA}}^2$	695.26	$697.3 (\nu: 2.1)$
$A_{100}^{\text{dust}EE}$	0.0817	$0.081^{+0.011}_{-0.011}$	$D_{2000}$	230.80	$230.5^{+3.2}_{-3.2}$	$\chi_{6\text{DF}}^2$	0.016	$0.056 (\nu: 0.0)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0492	$0.0489^{+0.0098}_{-0.0098}$	$n_{s,0.002}$	0.9669	$0.9657^{+0.0093}_{-0.0095}$	$\chi_{\text{MGS}}^2$	1.34	$1.42 (\nu: 0.2)$
$A_{100 \times 217}^{\text{dust}EE}$	0.100	$0.0996^{+0.064}_{-0.064}$	$Y_P$	0.245364	$0.24536^{+0.00014}_{-0.00014}$	$\chi_{\text{DR11CMass}}^2$	2.40	$2.97 (\nu: 0.4)$
$A_{143}^{\text{dust}EE}$	0.1006	$0.100^{+0.014}_{-0.014}$	$Y_P^{\text{BBN}}$	0.246691	$0.24668^{+0.00014}_{-0.00014}$	$\chi_{\text{DR11LOWZ}}^2$	0.54	$0.69 (\nu: 0.2)$
$A_{143 \times 217}^{\text{dust}EE}$	0.225	$0.224^{+0.091}_{-0.092}$	$10^5 D/H$	2.604	$2.606^{+0.059}_{-0.059}$	$\chi_{\text{prior}}^2$	6.8	$19.2 (\nu: 14.8)$
$A_{217}^{\text{dust}EE}$	0.656	$0.65^{+0.26}_{-0.25}$	$\text{Age/Gyr}$	13.787	$13.78^{+0.16}_{-0.16}$	$\chi_{\text{CMB}}^2$	12929.0	$12948.6 (\nu: 22.7)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.073}_{-0.075}$	$z_*$	1089.92	$1089.96^{+0.58}_{-0.58}$	$\chi_{\text{BAO}}^2$	4.30	$5.1 (\nu: 0.7)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.057}_{-0.056}$	$r_*$	144.72	$144.66^{+0.64}_{-0.63}$			
$A_{100 \times 217}^{\text{dust}TE}$	0.301	$0.30^{+0.17}_{-0.16}$	$100\theta_*$	1.04101	$1.04102^{+0.00063}_{-0.00061}$			

Best-fit  $\chi_{\text{eff}}^2 = 13636.15$ ;  $\bar{\chi}_{\text{eff}}^2 = 13671.07$ ;  $R - 1 = 0.01192$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.02 MGS: 1.34 DR11CMass: 2.40 DR11LOWZ: 0.54 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10497.10 plik\_dx11dr2\_HM\_v18\_TTTEEE:  
2431.92 Hubble - H070p6: 0.73 SN - JLA December\_2013: 695.26

## 19.14 base\_omegak\_plikHM\_TTTEEE\_lowTEB\_BAO\_H070p6\_JLA\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022282	$0.02228^{+0.00032}_{-0.00031}$	$A_{143}^{\text{dust}TE}$	0.156	$0.15^{+0.10}_{-0.10}$	$D_A/\text{Gpc}$	13.901	$13.901^{+0.061}_{-0.058}$
$\Omega_c h^2$	0.11913	$0.1192^{+0.0029}_{-0.0030}$	$A_{143 \times 217}^{\text{dust}TE}$	0.338	$0.34^{+0.15}_{-0.15}$	$z_{\text{drag}}$	1059.67	$1059.66^{+0.62}_{-0.60}$
$100\theta_{\text{MC}}$	1.04086	$1.04086^{+0.00063}_{-0.00063}$	$A_{217}^{\text{dust}TE}$	1.66	$1.66^{+0.52}_{-0.50}$	$r_{\text{drag}}$	147.42	$147.42^{+0.63}_{-0.60}$
$\tau$	0.0658	$0.064^{+0.025}_{-0.023}$	$c_{100}$	0.99816	$0.9982^{+0.0015}_{-0.0016}$	$k_D$	0.14046	$0.14045^{+0.00062}_{-0.00064}$
$\Omega_K$	0.00081	$0.0008^{+0.0040}_{-0.0039}$	$c_{217}$	0.99610	$0.9960^{+0.0028}_{-0.0028}$	$100\theta_D$	0.160898	$0.16090^{+0.00035}_{-0.00035}$
$\ln(10^{10} A_s)$	3.0638	$3.061^{+0.045}_{-0.045}$	$H_0$	67.97	$67.9^{+1.3}_{-1.2}$	$z_{\text{eq}}$	3379	$3380^{+65}_{-67}$
$n_s$	0.9659	$0.9654^{+0.0092}_{-0.0096}$	$\Omega_\Lambda$	0.6917	$0.691^{+0.012}_{-0.012}$	$k_{\text{eq}}$	0.010314	$0.01032^{+0.00020}_{-0.00020}$
$y_{\text{cal}}$	1.00009	$1.0001^{+0.0046}_{-0.0048}$	$\Omega_m$	0.3075	$0.308^{+0.012}_{-0.012}$	$100\theta_{\text{eq}}$	0.8171	$0.817^{+0.013}_{-0.012}$
$\alpha_{JLA}$	0.1412	$0.141^{+0.013}_{-0.013}$	$\Omega_m h^2$	0.14206	$0.1421^{+0.0027}_{-0.0028}$	$100\theta_{s,\text{eq}}$	0.4514	$0.4514^{+0.0066}_{-0.0063}$
$\beta_{JLA}$	3.102	$3.10^{+0.16}_{-0.15}$	$\Omega_m h^3$	0.09655	$0.0965^{+0.0028}_{-0.0027}$	$r_{\text{drag}}/D_V(0.57)$	0.07190	$0.07187^{+0.00095}_{-0.00090}$
$A_{217}^{\text{CIB}}$	68.1	$65^{+10}_{-10}$	$\sigma_8$	0.8172	$0.816^{+0.018}_{-0.018}$	$H(0.57)$	93.30	$93.3^{+1.2}_{-1.2}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\sigma_8 \Omega_m^{0.5}$	0.4532	$0.453^{+0.012}_{-0.011}$	$D_A(0.57)$	1381.8	$1382^{+20}_{-21}$
$A_{143}^{\text{tSZ}}$	7.29	$5.2^{+3.7}_{-3.7}$	$\sigma_8 \Omega_m^{0.25}$	0.6086	$0.608^{+0.014}_{-0.013}$	$F_{\text{AP}}(0.57)$	0.67514	$0.6752^{+0.0030}_{-0.0030}$
$A_{100}^{\text{PS}}$	258	$263^{+50}_{-50}$	$\sigma_8/h^{0.5}$	0.9913	$0.990^{+0.021}_{-0.020}$	$f\sigma_8(0.57)$	0.4740	$0.473^{+0.010}_{-0.0097}$
$A_{143}^{\text{PS}}$	38.7	$44^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4533	$2.451^{+0.049}_{-0.049}$	$\sigma_8(0.57)$	0.6089	$0.608^{+0.015}_{-0.015}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$z_{\text{re}}$	8.82	$8.7^{+2.2}_{-2.4}$	$f_{2000}^{143}$	29.9	$30^{+5}_{-5}$
$A_{217}^{\text{PS}}$	96.2	$96^{+20}_{-20}$	$10^9 A_s$	2.141	$2.136^{+0.098}_{-0.094}$	$f_{2000}^{143 \times 217}$	32.59	$33^{+4}_{-4}$
$A^{\text{kSZ}}$	0.0	—	$10^9 A_s e^{-2\tau}$	1.8770	$1.878^{+0.023}_{-0.024}$	$f_{2000}^{217}$	106.12	$106.1^{+3.6}_{-3.6}$
$A_{100}^{\text{dust}TT}$	7.46	$7.5^{+3.7}_{-3.8}$	$D_{40}$	1230.4	$1232^{+25}_{-24}$	$\chi^2_{\text{lensing}}$	9.67	10.2 ( $\nu$ : 1.5)
$A_{143}^{\text{dust}TT}$	9.07	$9.0^{+3.6}_{-3.5}$	$D_{220}$	5723	$5728^{+75}_{-77}$	$\chi^2_{\text{lowTEB}}$	10495.46	10495.9 ( $\nu$ : 0.8)
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.1^{+8.2}_{-8.1}$	$D_{810}$	2533.9	$2534^{+26}_{-26}$	$\chi^2_{\text{plik}}$	2434.8	2453.8 ( $\nu$ : 22.9)
$A_{217}^{\text{dust}TT}$	81.7	$81^{+10}_{-10}$	$D_{1420}$	814.6	$814.6^{+9.3}_{-9.3}$	$\chi^2_{\text{H070p6}}$	0.63	0.68 ( $\nu$ : 0.0)
$A_{100}^{\text{dust}EE}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{2000}$	230.15	$230.0^{+3.2}_{-3.1}$	$\chi^2_{\text{JLA}}$	695.21	697.3 ( $\nu$ : 2.0)
$A_{100 \times 143}^{\text{dust}EE}$	0.0489	$0.0490^{+0.0092}_{-0.010}$	$n_{s,0.002}$	0.9659	$0.9654^{+0.0092}_{-0.0096}$	$\chi^2_{6\text{DF}}$	0.003	0.043 ( $\nu$ : 0.0)
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.0999^{+0.065}_{-0.060}$	$Y_P$	0.245354	$0.24535^{+0.00014}_{-0.00015}$	$\chi^2_{\text{MGS}}$	1.54	1.58 ( $\nu$ : 0.2)
$A_{143}^{\text{dust}EE}$	0.1003	$0.100^{+0.014}_{-0.014}$	$Y_P^{\text{BBN}}$	0.246681	$0.24668^{+0.00014}_{-0.00015}$	$\chi^2_{\text{DR11CMass}}$	2.37	2.91 ( $\nu$ : 0.3)
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.224^{+0.091}_{-0.093}$	$10^5 D/H$	2.608	$2.609^{+0.060}_{-0.061}$	$\chi^2_{\text{DR11LOWZ}}$	0.36	0.53 ( $\nu$ : 0.1)
$A_{217}^{\text{dust}EE}$	0.650	$0.65^{+0.25}_{-0.25}$	Age/Gyr	13.765	$13.77^{+0.15}_{-0.16}$	$\chi^2_{\text{prior}}$	7.1	19.2 ( $\nu$ : 14.7)
$A_{100}^{\text{dust}TE}$	0.140	$0.141^{+0.078}_{-0.074}$	$z_*$	1089.96	$1089.96^{+0.58}_{-0.59}$	$\chi^2_{\text{CMB}}$	12940.0	12959.9 ( $\nu$ : 22.2)
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.057}_{-0.055}$	$r_*$	144.72	$144.72^{+0.66}_{-0.62}$	$\chi^2_{\text{BAO}}$	4.27	5.1 ( $\nu$ : 0.6)
$A_{100 \times 217}^{\text{dust}TE}$	0.303	$0.30^{+0.17}_{-0.17}$	$100\theta_*$	1.04106	$1.04105^{+0.00061}_{-0.00062}$			

Best-fit  $\chi^2_{\text{eff}} = 13647.18$ ;  $\bar{\chi}^2_{\text{eff}} = 13682.17$ ;  $R - 1 = 0.04475$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.54 DR11CMASS: 2.37 DR11LOWZ: 0.36 CMB - smica\_g30\_ftl\_full\_pp: 9.67 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.46 plik\_dx11dr2\_HM\_v18\_TT: 2434.84 Hubble - H070p6: 0.63 SN - JLA December\_2013: 695.21

### 19.15 base\_omegak\_plikHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022303	$0.02231^{+0.00045}_{-0.00045}$	$\Omega_m$	0.314	$0.327^{+0.064}_{-0.061}$	$D_A/\text{Gpc}$	13.923	$13.926^{+0.086}_{-0.088}$
$\Omega_c h^2$	0.11813	$0.1180^{+0.0044}_{-0.0042}$	$\Omega_m h^2$	0.14107	$0.1409^{+0.0041}_{-0.0040}$	$z_{\text{drag}}$	1059.63	$1059.64^{+0.87}_{-0.88}$
$100\theta_{\text{MC}}$	1.04104	$1.04111^{+0.00097}_{-0.00093}$	$\Omega_m h^3$	0.0946	$0.0929^{+0.010}_{-0.0094}$	$r_{\text{drag}}$	147.67	$147.71^{+0.92}_{-0.94}$
$\tau$	0.0635	$0.058^{+0.039}_{-0.038}$	$\sigma_8$	0.8104	$0.804^{+0.039}_{-0.038}$	$k_D$	0.14021	$0.1402^{+0.0010}_{-0.00097}$
$\Omega_K$	-0.0020	$-0.005^{+0.016}_{-0.017}$	$\sigma_8 \Omega_m^{0.5}$	0.4540	$0.458^{+0.027}_{-0.026}$	$100\theta_D$	0.16093	$0.16095^{+0.00051}_{-0.00049}$
$\ln(10^{10} A_s)$	3.057	$3.046^{+0.076}_{-0.075}$	$\sigma_8 \Omega_m^{0.25}$	0.6066	$0.607^{+0.015}_{-0.015}$	$z_{\text{eq}}$	3356	$3352^{+99}_{-94}$
$n_s$	0.9690	$0.969^{+0.013}_{-0.012}$	$\sigma_8/h^{0.5}$	0.9897	$0.990^{+0.022}_{-0.022}$	$k_{\text{eq}}$	0.010242	$0.01023^{+0.00030}_{-0.00029}$
$y_{\text{cal}}$	1.00026	$1.0000^{+0.0049}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.449	$2.454^{+0.056}_{-0.056}$	$100\theta_{\text{eq}}$	0.8216	$0.822^{+0.019}_{-0.019}$
$A_{217}^{\text{CIB}}$	67.5	$64^{+10}_{-10}$	$z_{\text{re}}$	8.57	$7.9^{+3.9}_{-4.2}$	$100\theta_{\text{s,eq}}$	0.4538	$0.4542^{+0.0096}_{-0.0097}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.126	$2.10^{+0.16}_{-0.16}$	$r_{\text{drag}}/D_V(0.57)$	0.07122	$0.0704^{+0.0049}_{-0.0046}$
$A_{143}^{\text{tSZ}}$	7.20	$5.1^{+3.7}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8722	$1.871^{+0.027}_{-0.026}$	$H(0.57)$	92.4	$91.5^{+5.4}_{-5.0}$
$A_{100}^{\text{PS}}$	254	$259^{+50}_{-50}$	$D_{40}$	1220.8	$1219^{+33}_{-32}$	$D_A(0.57)$	1398	$1419^{+110}_{-100}$
$A_{143}^{\text{PS}}$	38.9	$44^{+20}_{-20}$	$D_{220}$	5719	$5721^{+80}_{-82}$	$F_{\text{AP}}(0.57)$	0.6763	$0.679^{+0.014}_{-0.013}$
$A_{143 \times 217}^{\text{PS}}$	32	$38^{+20}_{-20}$	$D_{810}$	2532.9	$2531^{+27}_{-27}$	$f\sigma_8(0.57)$	0.4721	$0.471^{+0.011}_{-0.011}$
$A_{217}^{\text{PS}}$	96.7	$96^{+20}_{-20}$	$D_{1420}$	815.1	$814^{+10}_{-9.8}$	$\sigma_8(0.57)$	0.6022	$0.595^{+0.042}_{-0.041}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.42	$230.2^{+3.6}_{-3.5}$	$f_{2000}^{143}$	29.8	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.46	$7.5^{+3.6}_{-3.7}$	$n_{\text{s},0.002}$	0.9690	$0.969^{+0.013}_{-0.012}$	$f_{2000}^{143 \times 217}$	32.45	$33^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.10	$9.1^{+3.6}_{-3.6}$	$Y_{\text{P}}$	0.245363	$0.24536^{+0.00020}_{-0.00020}$	$f_{2000}^{217}$	106.01	$106.1^{+3.8}_{-3.9}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.2^{+8.1}_{-8.1}$	$Y_{\text{P}}^{\text{BBN}}$	0.246690	$0.24669^{+0.00020}_{-0.00020}$	$\chi^2_{\text{lensing}}$	9.34	$10.5 (\nu: 2.4)$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$10^5 D/H$	2.604	$2.604^{+0.086}_{-0.085}$	$\chi^2_{\text{lowTEB}}$	10494.34	$10495.3 (\nu: 1.7)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.89	$14.02^{+0.68}_{-0.67}$	$\chi^2_{\text{plik}}$	766.2	$779.9 (\nu: 15.9)$
$c_{217}$	0.99599	$0.9960^{+0.0029}_{-0.0028}$	$z_*$	1089.84	$1089.83^{+0.86}_{-0.86}$	$\chi^2_{\text{prior}}$	2.1	$7.4 (\nu: 6.4)$
$H_0$	67.0	$65.9^{+6.4}_{-6.1}$	$r_*$	144.97	$145.01^{+0.94}_{-0.98}$	$\chi^2_{\text{CMB}}$	11269.9	$11285.7 (\nu: 15.8)$
$\Omega_\Lambda$	0.6882	$0.679^{+0.047}_{-0.049}$	$100\theta_*$	1.04124	$1.04130^{+0.00095}_{-0.00091}$			

Best-fit  $\chi^2_{\text{eff}} = 11272.04$ ;  $\bar{\chi}^2_{\text{eff}} = 11293.13$ ;  $R - 1 = 0.00816$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl.full\_pp: 9.34 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.34 plik\_dx11dr2\_HM\_v18.TT: 766.24

# 19.16 base\_omegak\_plikHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022252	$0.02228^{+0.00031}_{-0.00031}$	$A_{100 \times 217}^{\text{dustTE}}$	0.304	$0.30^{+0.17}_{-0.17}$	Age/Gyr	13.90	$13.96^{+0.65}_{-0.63}$
$\Omega_c h^2$	0.11918	$0.1190^{+0.0030}_{-0.0029}$	$A_{143}^{\text{dustTE}}$	0.155	$0.16^{+0.11}_{-0.10}$	$z_*$	1090.00	$1089.95^{+0.60}_{-0.59}$
$100\theta_{\text{MC}}$	1.04085	$1.04089^{+0.00064}_{-0.00066}$	$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.16}_{-0.16}$	$r_*$	144.73	$144.75^{+0.64}_{-0.65}$
$\tau$	0.0584	$0.056^{+0.037}_{-0.037}$	$A_{217}^{\text{dustTE}}$	1.668	$1.66^{+0.50}_{-0.49}$	$100\theta_*$	1.04104	$1.04108^{+0.00063}_{-0.00065}$
$\Omega_K$	-0.0020	$-0.004^{+0.015}_{-0.015}$	$c_{100}$	0.99817	$0.9981^{+0.0016}_{-0.0015}$	$D_A/\text{Gpc}$	13.903	$13.904^{+0.059}_{-0.060}$
$\ln(10^{10} A_s)$	3.049	$3.045^{+0.074}_{-0.074}$	$c_{217}$	0.99604	$0.9960^{+0.0029}_{-0.0028}$	$z_{\text{drag}}$	1059.59	$1059.66^{+0.63}_{-0.60}$
$n_s$	0.9659	$0.9659^{+0.0094}_{-0.0095}$	$H_0$	66.6	$66.2^{+6.3}_{-6.0}$	$r_{\text{drag}}$	147.44	$147.45^{+0.62}_{-0.64}$
$y_{\text{cal}}$	0.9998	$1.0001^{+0.0050}_{-0.0051}$	$\Omega_\Lambda$	0.6813	$0.677^{+0.046}_{-0.048}$	$k_D$	0.14041	$0.14042^{+0.00065}_{-0.00064}$
$A_{217}^{\text{CIB}}$	67.9	$65^{+10}_{-10}$	$\Omega_m$	0.321	$0.326^{+0.063}_{-0.060}$	$100\theta_D$	0.160936	$0.16091^{+0.00036}_{-0.00034}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m h^2$	0.14208	$0.1420^{+0.0029}_{-0.0027}$	$z_{\text{eq}}$	3380	$3377^{+68}_{-65}$
$A_{143}^{\text{tSZ}}$	7.35	$5.3^{+3.7}_{-3.9}$	$\Omega_m h^3$	0.0946	$0.0939^{+0.0095}_{-0.0089}$	$k_{\text{eq}}$	0.010316	$0.01031^{+0.00021}_{-0.00020}$
$A_{100}^{\text{PS}}$	257	$262^{+60}_{-50}$	$\sigma_8$	0.8097	$0.807^{+0.037}_{-0.038}$	$100\theta_{\text{eq}}$	0.8169	$0.818^{+0.013}_{-0.013}$
$A_{143}^{\text{PS}}$	38.5	$43^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4586	$0.460^{+0.025}_{-0.025}$	$100\theta_{s,\text{eq}}$	0.4514	$0.4517^{+0.0065}_{-0.0066}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6093	$0.609^{+0.013}_{-0.013}$	$r_{\text{drag}}/D_V(0.57)$	0.07084	$0.0705^{+0.0048}_{-0.0045}$
$A_{217}^{\text{PS}}$	96.4	$96^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9925	$0.992^{+0.020}_{-0.020}$	$H(0.57)$	92.2	$91.9^{+5.2}_{-4.8}$
$A^{\text{kSZ}}$	0.00	$< 8.27$	$\langle d^2 \rangle^{1/2}$	2.457	$2.459^{+0.052}_{-0.053}$	$D_A(0.57)$	1405	$1413^{+110}_{-100}$
$A_{100}^{\text{dustTT}}$	7.50	$7.5^{+3.7}_{-3.6}$	$z_{\text{re}}$	8.10	$7.8^{+3.8}_{-4.2}$	$F_{\text{AP}}(0.57)$	0.6781	$0.679^{+0.013}_{-0.012}$
$A_{143}^{\text{dustTT}}$	9.08	$9.1^{+3.6}_{-3.6}$	$10^9 A_s$	2.109	$2.10^{+0.16}_{-0.16}$	$f\sigma_8(0.57)$	0.4734	$0.473^{+0.010}_{-0.010}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.3^{+8.2}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8760	$1.877^{+0.024}_{-0.024}$	$\sigma_8(0.57)$	0.6001	$0.597^{+0.041}_{-0.041}$
$A_{217}^{\text{dustTT}}$	81.8	$82^{+31}_{-10}$	$D_{40}$	1225.8	$1227^{+31}_{-29}$	$f_{2000}^{143}$	29.8	$30^{+5}_{-5}$
$A_{100}^{\text{dustEE}}$	0.0814	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5717	$5727^{+77}_{-76}$	$f_{2000}^{143 \times 217}$	32.54	$33^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0491	$0.0491^{+0.0099}_{-0.0097}$	$D_{810}$	2532.6	$2533^{+27}_{-27}$	$f_{2000}^{217}$	106.04	$106.1^{+3.7}_{-3.6}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.099^{+0.064}_{-0.063}$	$D_{1420}$	814.1	$814.5^{+9.6}_{-9.6}$	$\chi^2_{\text{lensing}}$	10.06	$11.0 (\nu: 3.1)$
$A_{143}^{\text{dustEE}}$	0.1003	$0.100^{+0.014}_{-0.013}$	$D_{2000}$	229.97	$230.1^{+3.1}_{-3.2}$	$\chi^2_{\text{lowTEB}}$	10494.87	$10495.9 (\nu: 1.6)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.224^{+0.091}_{-0.092}$	$n_{s,0.002}$	0.9659	$0.9659^{+0.0094}_{-0.0095}$	$\chi^2_{\text{plik}}$	2434.8	$2453.5 (\nu: 23.2)$
$A_{217}^{\text{dustEE}}$	0.653	$0.65^{+0.25}_{-0.25}$	$Y_P$	0.245341	$0.24535^{+0.00014}_{-0.00014}$	$\chi^2_{\text{prior}}$	7.1	$19.5 (\nu: 15.5)$
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.075}_{-0.074}$	$Y_P^{\text{BBN}}$	0.246667	$0.24668^{+0.00014}_{-0.00015}$	$\chi^2_{\text{CMB}}$	12939.7	$12960.4 (\nu: 23.0)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.132^{+0.057}_{-0.057}$	$10^5 \text{D}/\text{H}$	2.614	$2.608^{+0.059}_{-0.059}$			

Best-fit  $\chi^2_{\text{eff}} = 12946.82$ ;  $\bar{\chi}^2_{\text{eff}} = 12979.96$ ;  $R - 1 = 0.01082$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 10.06 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.87 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2434.77

### 19.17 base\_omegak\_CamSpecHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022332	$0.02233^{+0.00049}_{-0.00047}$ (+0.1 $\sigma$ )	$H_0$	67.3	$65.6^{+6.5}_{-6.2}$ (-0.1 $\sigma$ )	$z_{\text{drag}}$	1059.67	$1059.65^{+0.94}_{-0.91}$ (+0.0 $\sigma$ )
$\Omega_c h^2$	0.11759	$0.1177^{+0.0045}_{-0.0044}$ (-0.1 $\sigma$ )	$\Omega_\Lambda$	0.6917	$0.677^{+0.048}_{-0.051}$ (-0.1 $\sigma$ )	$r_{\text{drag}}$	147.78	$147.76^{+0.95}_{-0.94}$ (+0.1 $\sigma$ )
$100\theta_{\text{MC}}$	1.04120	$1.04117^{+0.00095}_{-0.00094}$ (+0.1 $\sigma$ )	$\Omega_m$	0.310	$0.329^{+0.066}_{-0.063}$ (+0.1 $\sigma$ )	$k_D$	0.14013	$0.14014^{+0.00098}_{-0.00099}$ (-0.0 $\sigma$ )
$\tau$	0.0716	$0.061^{+0.040}_{-0.041}$ (+0.1 $\sigma$ )	$\Omega_m h^2$	0.14056	$0.1407^{+0.0042}_{-0.0041}$ (-0.1 $\sigma$ )	$100\theta_D$	0.16092	$0.16092^{+0.00053}_{-0.00052}$ (-0.1 $\sigma$ )
$\Omega_K$	-0.0020	$-0.006^{+0.016}_{-0.017}$ (-0.1 $\sigma$ )	$\Omega_m h^3$	0.0946	$0.0923^{+0.010}_{-0.0097}$ (-0.1 $\sigma$ )	$z_{\text{eq}}$	3344	$3346^{+100}_{-98}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.070	$3.047^{+0.078}_{-0.080}$ (+0.0 $\sigma$ )	$\sigma_8$	0.8146	$0.803^{+0.039}_{-0.041}$ (-0.0 $\sigma$ )	$100\theta_{\text{eq}}$	0.8240	$0.824^{+0.020}_{-0.019}$ (+0.1 $\sigma$ )
$n_s$	0.9714	$0.972^{+0.013}_{-0.013}$ (+0.4 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4537	$0.460^{+0.026}_{-0.026}$ (+0.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07143	$0.0701^{+0.0049}_{-0.0047}$ (-0.1 $\sigma$ )
$y_{\text{cal}}$	1.00055	$0.9999^{+0.0049}_{-0.0050}$ (-0.1 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6080	$0.608^{+0.015}_{-0.015}$ (+0.1 $\sigma$ )	$H(0.57)$	92.5	$91.2^{+5.4}_{-5.1}$ (-0.1 $\sigma$ )
$A_{100}^{\text{PS}}$	249.5	$246^{+40}_{-50}$ (-0.5 $\sigma$ )	$\sigma_8/h^{0.5}$	0.9929	$0.993^{+0.022}_{-0.022}$ (+0.2 $\sigma$ )	$D_A(0.57)$	1395	$1425^{+110}_{-110}$ (+0.1 $\sigma$ )
$A_{143}^{\text{PS}}$	34.4	$38^{+20}_{-20}$ (-0.6 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.455	$2.455^{+0.055}_{-0.056}$ (+0.0 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6754	$0.679^{+0.014}_{-0.013}$ (+0.1 $\sigma$ )
$A_{217}^{\text{PS}}$	94.3	$97^{+30}_{-30}$ (+0.1 $\sigma$ )	$z_{\text{re}}$	9.32	$8.1^{+4.0}_{-4.4}$ (+0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4737	$0.472^{+0.011}_{-0.012}$ (+0.1 $\sigma$ )
$A_{217}^{\text{CIB}}$	47.3	$46^{+10}_{-10}$ (-2.7 $\sigma$ )	$10^9 A_s$	2.154	$2.11^{+0.17}_{-0.16}$ (+0.0 $\sigma$ )	$\sigma_8(0.57)$	0.6062	$0.594^{+0.042}_{-0.044}$ (-0.0 $\sigma$ )
$A_{143}^{\text{tSZ}}$	2.87	< 6.67 (-1.0 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.8666	$1.865^{+0.028}_{-0.027}$ (-0.4 $\sigma$ )	$Y_{\text{P}}^{\text{BBN}}$	0.246286	$0.24628^{+0.00020}_{-0.00021}$ (-3.8 $\sigma$ )
$r_{143 \times 217}^{\text{PS}}$	0.390	$0.51^{+0.23}_{-0.21}$	$D_{40}$	1216.0	$1210^{+34}_{-34}$ (-0.5 $\sigma$ )	$f_{2000}^{143}$	29.3	$29^{+6}_{-6}$ (-0.5 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{220}$	5705	$5699^{+82}_{-81}$ (-0.5 $\sigma$ )	$f_{2000}^{217}$	106.63	$106.3^{+4.0}_{-4.0}$ (+0.1 $\sigma$ )
$A^{\text{kSZ}}$	6.0	—	$D_{810}$	2528.7	$2526^{+28}_{-28}$ (-0.3 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.65	$32^{+4}_{-4}$ (-0.4 $\sigma$ )
$A_{100}^{\text{dust}}$	0.984	$0.99^{+0.38}_{-0.38}$	$D_{1420}$	814.6	$814^{+10}_{-11}$ (-0.1 $\sigma$ )	$\chi_{\text{lensing}}^2$	9.29	10.4 ( $\nu$ : 2.2) (-0.0 $\sigma$ )
$A_{143}^{\text{dust}}$	1.042	$1.03^{+0.36}_{-0.35}$	$n_{s,0.002}$	0.9714	$0.972^{+0.013}_{-0.013}$ (+0.4 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10494.15	10494.8 ( $\nu$ : 1.6) (-0.3 $\sigma$ )
$A_{217}^{\text{dust}}$	1.216	$1.21^{+0.22}_{-0.22}$	$Y_{\text{P}}$	0.244955	$0.24495^{+0.00021}_{-0.00020}$ (-3.9 $\sigma$ )	$\chi_{\text{CamSpec}}^2$	8046.7	8061.8 ( $\nu$ : 17.0)
$A_{143 \times 217}^{\text{dust}}$	0.944	$0.98^{+0.35}_{-0.35}$	Age/Gyr	13.88	$14.06^{+0.71}_{-0.67}$ (+0.1 $\sigma$ )	$\chi_{\text{prior}}^2$	3.8	8.4 ( $\nu$ : 6.0) (+0.3 $\sigma$ )
$c_{100}$	0.99655	$0.9968^{+0.0020}_{-0.0019}$ (-1.4 $\sigma$ )	$z_*$	1089.74	$1089.76^{+0.90}_{-0.88}$ (-0.1 $\sigma$ )	$\chi_{\text{CMB}}^2$	18550.2	18567.0 ( $\nu$ : 17.2) (+1295.5 $\sigma$ )
$c_{217}$	0.99733	$0.9973^{+0.0034}_{-0.0035}$ (+0.9 $\sigma$ )	$r_*$	145.09	$145.07^{+0.97}_{-0.97}$ (+0.1 $\sigma$ )			
$\beta_1^1$	-0.17	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	1.04141	$1.04137^{+0.00092}_{-0.00091}$ (+0.1 $\sigma$ )			

Best-fit  $\chi_{\text{eff}}^2 = 18554.01$ ;  $\Delta\chi_{\text{eff}}^2 = 7281.97$ ;  $\bar{\chi}_{\text{eff}}^2 = 18575.47$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 7282.35$ ;  $R - 1 = 0.01768$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.29 ( $\Delta$  -0.05) lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.15 ( $\Delta$  -0.19) CamSpec like\_v9.10CMH\_unified: 8046.73

# 19.18 base\_omegak\_CamSpecHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022371	$0.02239^{+0.00031}_{-0.00032}$ $(+0.7\sigma)$	$\mathcal{C}_{EE}$	1.0012	$1.0013^{+0.0082}_{-0.0083}$	$r_*$	144.83	$144.84^{+0.60}_{-0.63}$ $(+0.3\sigma)$
$\Omega_c h^2$	0.11845	$0.1184^{+0.0028}_{-0.0027}$ $(-0.4\sigma)$	$\beta_1^1$	-0.12	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	1.04113	$1.04112^{+0.00059}_{-0.00060}$ $(+0.1\sigma)$
$100\theta_{MC}$	1.04094	$1.04092^{+0.00060}_{-0.00061}$ $(+0.1\sigma)$	$H_0$	67.7	$65.4^{+6.4}_{-5.9}$ $(-0.2\sigma)$	$z_{drag}$	1059.82	$1059.85^{+0.63}_{-0.62}$ $(+0.6\sigma)$
$\tau$	0.0693	$0.055^{+0.036}_{-0.040}$ $(-0.1\sigma)$	$\Omega_\Lambda$	0.6918	$0.673^{+0.045}_{-0.051}$ $(-0.2\sigma)$	$r_{drag}$	147.50	$147.50^{+0.59}_{-0.61}$ $(+0.2\sigma)$
$\Omega_K$	-0.0004	$-0.006^{+0.015}_{-0.016}$ $(-0.3\sigma)$	$\Omega_m$	0.309	$0.333^{+0.064}_{-0.063}$ $(+0.2\sigma)$	$k_D$	0.14045	$0.14047^{+0.00065}_{-0.00065}$ $(+0.1\sigma)$
$\ln(10^{10} A_s)$	3.066	$3.037^{+0.073}_{-0.074}$ $(-0.2\sigma)$	$\Omega_m h^2$	0.14147	$0.1414^{+0.0027}_{-0.0025}$ $(-0.4\sigma)$	$100\theta_D$	0.160790	$0.16077^{+0.00038}_{-0.00036}$ $(-0.8\sigma)$
$n_s$	0.9687	$0.9693^{+0.0093}_{-0.0091}$ $(+0.7\sigma)$	$\Omega_m h^3$	0.0958	$0.0925^{+0.0096}_{-0.0088}$ $(-0.3\sigma)$	$z_{eq}$	3365	$3364^{+63}_{-59}$ $(-0.4\sigma)$
$y_{cal}$	0.99997	$0.9999^{+0.0051}_{-0.0049}$ $(-0.1\sigma)$	$\sigma_8$	0.8159	$0.801^{+0.037}_{-0.037}$ $(-0.3\sigma)$	$100\theta_{eq}$	0.8200	$0.820^{+0.012}_{-0.012}$ $(+0.4\sigma)$
$A_{100}^{PS}$	249.0	$245^{+40}_{-40}$ $(-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4532	$0.461^{+0.025}_{-0.026}$ $(+0.1\sigma)$	$r_{drag}/D_V(0.57)$	0.07168	$0.0699^{+0.0049}_{-0.0045}$ $(-0.3\sigma)$
$A_{143}^{PS}$	34.7	$38^{+10}_{-10}$ $(-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.6081	$0.607^{+0.013}_{-0.013}$ $(-0.2\sigma)$	$H(0.57)$	93.0	$91.2^{+5.2}_{-4.7}$ $(-0.3\sigma)$
$A_{217}^{PS}$	95.0	$97^{+30}_{-30}$ $(+0.1\sigma)$	$\sigma_8/h^{0.5}$	0.9915	$0.991^{+0.020}_{-0.021}$ $(-0.2\sigma)$	$D_A(0.57)$	1387	$1427^{+110}_{-100}$ $(+0.3\sigma)$
$A_{217}^{CIB}$	47.1	$46^{+10}_{-10}$ $(-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	2.453	$2.453^{+0.052}_{-0.055}$ $(-0.2\sigma)$	$F_{AP}(0.57)$	0.6752	$0.680^{+0.014}_{-0.013}$ $(+0.2\sigma)$
$A_{143}^{tSZ}$	3.06	$< 6.71$ $(-1.0\sigma)$	$z_{re}$	9.12	$7.5^{+3.8}_{-4.2}$ $(-0.1\sigma)$	$f\sigma_8(0.57)$	0.4737	$0.471^{+0.010}_{-0.010}$ $(-0.3\sigma)$
$r_{143 \times 217}^{PS}$	0.398	$0.51^{+0.23}_{-0.20}$	$10^9 A_s$	2.147	$2.09^{+0.15}_{-0.16}$ $(-0.2\sigma)$	$\sigma_8(0.57)$	0.6076	$0.591^{+0.041}_{-0.041}$ $(-0.3\sigma)$
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8686	$1.869^{+0.023}_{-0.022}$ $(-0.7\sigma)$	$Y_P^{BBN}$	0.246303	$0.24631^{+0.00013}_{-0.00014}$ $(-5.1\sigma)$
$A^{kSZ}$	5.6	—	$D_{40}$	1221.3	$1214^{+29}_{-28}$ $(-0.8\sigma)$	$f_{2000}^{143}$	29.2	$29^{+5}_{-5}$ $(-0.5\sigma)$
$A_{100}^{dust}$	0.990	$0.99^{+0.37}_{-0.38}$	$D_{220}$	5707	$5710^{+77}_{-74}$ $(-0.4\sigma)$	$f_{2000}^{217}$	106.50	$106.1^{+3.6}_{-3.6}$ $(-0.0\sigma)$
$A_{143}^{dust}$	1.031	$1.03^{+0.36}_{-0.36}$	$D_{810}$	2526.9	$2528^{+28}_{-26}$ $(-0.4\sigma)$	$f_{2000}^{143 \times 217}$	31.59	$31^{+4}_{-4}$ $(-0.6\sigma)$
$A_{217}^{dust}$	1.223	$1.21^{+0.23}_{-0.23}$	$D_{1420}$	813.7	$814^{+10}_{-9.4}$ $(-0.0\sigma)$	$\chi_{lensing}^2$	9.43	$10.6 (\nu: 2.4)$ $(-0.2\sigma)$
$A_{143 \times 217}^{dust}$	0.965	$0.99^{+0.35}_{-0.35}$	$n_{s,0.002}$	0.9687	$0.9693^{+0.0093}_{-0.0091}$ $(+0.7\sigma)$	$\chi_{lowTEB}^2$	10494.71	$10495.0 (\nu: 1.2)$ $(-0.5\sigma)$
$c_{100}$	0.99661	$0.9968^{+0.0019}_{-0.0019}$ $(-1.8\sigma)$	$Y_P$	0.244972	$0.24498^{+0.00014}_{-0.00014}$ $(-5.1\sigma)$	$\chi_{CamSpec}^2$	12937.0	$12953.7 (\nu: 18.3)$
$c_{217}$	0.99735	$0.9971^{+0.0035}_{-0.0035}$ $(+0.7\sigma)$	Age/Gyr	13.81	$14.05^{+0.65}_{-0.65}$ $(+0.3\sigma)$	$\chi_{prior}^2$	3.9	$9.1 (\nu: 6.5)$ $(-1.9\sigma)$
$c_{TE}$	1.0045	$1.0051^{+0.0088}_{-0.0086}$	$z_*$	1089.77	$1089.74^{+0.61}_{-0.56}$ $(-0.7\sigma)$	$\chi_{CMB}^2$	23441.2	$23459.3 (\nu: 19.0)$ $(+1549.4\sigma)$

Best-fit  $\chi_{eff}^2 = 23445.09$ ;  $\Delta\chi_{eff}^2 = 10498.27$ ;  $\bar{\chi}_{eff}^2 = 23468.39$ ;  $\Delta\bar{\chi}_{eff}^2 = 10488.43$ ;  $R - 1 = 0.01340$

$\chi_{eff}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.43 ( $\Delta$  -0.63) lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.71 ( $\Delta$  -0.16) CamSpec like\_v9.10CMH\_unified: 12937.04

## 20 r

### 20.1 base\_r\_plikHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022242	$0.02224^{+0.00046}_{-0.00045}$	$\Omega_m h^3$	0.09601	$0.09597^{+0.00091}_{-0.00090}$	$100\theta_D$	0.16094	$0.16096^{+0.00054}_{-0.00053}$
$\Omega_c h^2$	0.11961	$0.1195^{+0.0044}_{-0.0042}$	$\sigma_8$	0.8307	$0.828^{+0.028}_{-0.028}$	$z_{\text{eq}}$	3390	$3387^{+99}_{-95}$
$100\theta_{\text{MC}}$	1.04089	$1.04089^{+0.00093}_{-0.00095}$	$\sigma_8 \Omega_m^{0.5}$	0.4654	$0.463^{+0.026}_{-0.026}$	$k_{\text{eq}}$	0.010346	$0.01034^{+0.00030}_{-0.00029}$
$\tau$	0.0795	$0.077^{+0.038}_{-0.037}$	$\sigma_8 \Omega_m^{0.25}$	0.6218	$0.619^{+0.026}_{-0.026}$	$100\theta_{\text{eq}}$	0.8151	$0.816^{+0.018}_{-0.018}$
$\ln(10^{10} A_s)$	3.093	$3.087^{+0.071}_{-0.072}$	$\sigma_8/h^{0.5}$	1.0120	$1.008^{+0.038}_{-0.038}$	$100\theta_{s,\text{eq}}$	0.4504	$0.4508^{+0.0095}_{-0.0094}$
$n_s$	0.9663	$0.967^{+0.012}_{-0.012}$	$\langle d^2 \rangle^{1/2}$	2.499	$2.490^{+0.089}_{-0.090}$	$r_{\text{drag}}/D_V(0.57)$	0.07145	$0.0715^{+0.0015}_{-0.0015}$
$r$	0.000	$< 0.109$	$z_{\text{re}}$	10.12	$9.8^{+3.4}_{-3.6}$	$H(0.57)$	92.90	$92.92^{+0.85}_{-0.82}$
$y_{\text{cal}}$	1.00034	$1.0004^{+0.0049}_{-0.0048}$	$10^9 A_s$	2.204	$2.19^{+0.16}_{-0.15}$	$D_A(0.57)$	1390.7	$1390^{+26}_{-26}$
$A_{217}^{\text{CIB}}$	66.6	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8797	$1.879^{+0.027}_{-0.027}$	$F_{\text{AP}}(0.57)$	0.6766	$0.6765^{+0.0069}_{-0.0065}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.07	—	$D_{40}$	1235.3	$1248^{+36}_{-35}$	$f\sigma_8(0.57)$	0.4836	$0.482^{+0.018}_{-0.018}$
$A_{143}^{\text{tSZ}}$	7.06	$5.2^{+3.7}_{-3.8}$	$D_{220}$	5716	$5715^{+81}_{-80}$	$\sigma_8(0.57)$	0.6174	$0.615^{+0.022}_{-0.022}$
$A_{100}^{\text{PS}}$	253	$257^{+50}_{-50}$	$D_{810}$	2534.4	$2534^{+27}_{-27}$	$r_{0.002}$	0.000	$< 0.103$
$A_{143}^{\text{PS}}$	39.7	$44^{+20}_{-20}$	$D_{1420}$	814.9	$814.8^{+9.9}_{-9.9}$	$r_{0.01}$	0.000	$< 0.106$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$D_{2000}$	230.53	$230.4^{+3.6}_{-3.7}$	$\ln(10^{10} A_t)$	-8.41	$-0.7^{+2.1}_{-2.5}$
$A_{217}^{\text{PS}}$	98.2	$97^{+20}_{-20}$	$n_{s,0.002}$	0.9663	$0.967^{+0.012}_{-0.012}$	$r_{10}$	0.0000	$< 0.0522$
$A^{\text{kSZ}}$	0.01	$< 8.16$	$Y_{\text{P}}$	0.245336	$0.24533^{+0.00021}_{-0.00021}$	$10^9 A_t$	0.000	$< 0.238$
$A_{100}^{\text{dustTT}}$	7.39	$7.4^{+3.7}_{-3.7}$	$Y_{\text{P}}^{\text{BBN}}$	0.246663	$0.24666^{+0.00021}_{-0.00021}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.205$
$A_{143}^{\text{dustTT}}$	9.02	$9.0^{+3.6}_{-3.6}$	$10^5 \text{D}/\text{H}$	2.616	$2.617^{+0.089}_{-0.087}$	$f_{2000}^{143}$	29.5	$30^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.1^{+8.2}_{-8.2}$	$\text{Age}/\text{Gyr}$	13.810	$13.810^{+0.077}_{-0.077}$	$f_{2000}^{143 \times 217}$	32.19	$32^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$z_*$	1090.05	$1090.05^{+0.86}_{-0.84}$	$f_{2000}^{217}$	105.86	$105.9^{+4.0}_{-4.0}$
$c_{100}$	0.99789	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.63	$144.67^{+0.97}_{-0.97}$	$\chi_{\text{lowTEB}}^2$	10496.5	$10498.7 (\nu: 3.6)$
$c_{217}$	0.99595	$0.9959^{+0.0029}_{-0.0028}$	$100\theta_*$	1.04109	$1.04109^{+0.00091}_{-0.00093}$	$\chi_{\text{plik}}^2$	763.4	$777.5 (\nu: 16.3)$
$H_0$	67.38	$67.4^{+1.9}_{-1.9}$	$D_A/\text{Gpc}$	13.892	$13.896^{+0.089}_{-0.089}$	$\chi_{\text{prior}}^2$	2.0	$7.3 (\nu: 6.4)$
$\Omega_\Lambda$	0.6861	$0.687^{+0.025}_{-0.028}$	$z_{\text{drag}}$	1059.63	$1059.58^{+0.96}_{-0.91}$	$\chi_{\text{CMB}}^2$	11259.9	$11276.2 (\nu: 16.6)$
$\Omega_m$	0.3139	$0.313^{+0.028}_{-0.025}$	$r_{\text{drag}}$	147.34	$147.38^{+0.96}_{-0.95}$			
$\Omega_m h^2$	0.14250	$0.1424^{+0.0041}_{-0.0040}$	$k_D$	0.14051	$0.1405^{+0.0010}_{-0.0010}$			

Best-fit  $\chi_{\text{eff}}^2 = 11261.94$ ;  $\bar{\chi}_{\text{eff}}^2 = 11283.56$ ;  $R - 1 = 0.00544$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.51 plik\_dx11dr2\_HM\_v18\_TT: 763.39



## 20.2 base\_r\_plikHM\_TT\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022277	$0.02227^{+0.00040}_{-0.00040}$	$\sigma_8$	0.8295	$0.827^{+0.028}_{-0.028}$	$k_{\text{eq}}$	0.010302	$0.01030^{+0.00018}_{-0.00018}$
$\Omega_c h^2$	0.11897	$0.1189^{+0.0025}_{-0.0025}$	$\sigma_8 \Omega_m^{0.5}$	0.4619	$0.460^{+0.020}_{-0.020}$	$100\theta_{\text{eq}}$	0.8179	$0.818^{+0.011}_{-0.011}$
$100\theta_{\text{MC}}$	1.04095	$1.04096^{+0.00082}_{-0.00081}$	$\sigma_8 \Omega_m^{0.25}$	0.6190	$0.617^{+0.023}_{-0.023}$	$100\theta_{\text{s,eq}}$	0.4518	$0.4521^{+0.0057}_{-0.0056}$
$\tau$	0.0813	$0.079^{+0.035}_{-0.035}$	$\sigma_8/h^{0.5}$	1.0085	$1.006^{+0.036}_{-0.035}$	$r_{\text{drag}}/D_V(0.57)$	0.07166	$0.07170^{+0.00085}_{-0.00084}$
$\ln(10^{10} A_s)$	3.094	$3.090^{+0.068}_{-0.069}$	$\langle d^2 \rangle^{1/2}$	2.493	$2.485^{+0.085}_{-0.085}$	$H(0.57)$	93.01	$93.02^{+0.55}_{-0.53}$
$n_s$	0.9674	$0.9680^{+0.0087}_{-0.0087}$	$z_{\text{re}}$	10.25	$9.97^{+3.2}_{-3.3}$	$D_A(0.57)$	1387.2	$1387^{+15}_{-15}$
$r$	0.000	$< 0.113$	$10^9 A_s$	2.208	$2.20^{+0.15}_{-0.15}$	$F_{\text{AP}}(0.57)$	0.67567	$0.6755^{+0.0039}_{-0.0038}$
$y_{\text{cal}}$	1.00022	$1.0004^{+0.0049}_{-0.0049}$	$10^9 A_s e^{-2\tau}$	1.8765	$1.876^{+0.023}_{-0.023}$	$f\sigma_8(0.57)$	0.4819	$0.481^{+0.017}_{-0.017}$
$A_{217}^{\text{CIB}}$	67.2	$64^{+10}_{-10}$	$D_{40}$	1233.3	$1246^{+35}_{-33}$	$\sigma_8(0.57)$	0.6174	$0.616^{+0.021}_{-0.021}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{220}$	5718	$5717^{+80}_{-79}$	$r_{0.002}$	0.000	$< 0.107$
$A_{143}^{\text{tSZ}}$	7.19	$5.2^{+3.7}_{-3.8}$	$D_{810}$	2532.8	$2534^{+27}_{-27}$	$r_{0.01}$	0.000	$< 0.110$
$A_{100}^{\text{PS}}$	252	$256^{+60}_{-50}$	$D_{1420}$	814.7	$815.1^{+9.7}_{-9.7}$	$\ln(10^{10} A_t)$	-6.78	$-0.6^{+2.0}_{-2.5}$
$A_{143}^{\text{PS}}$	38.1	$43^{+20}_{-20}$	$D_{2000}$	230.48	$230.6^{+3.5}_{-3.5}$	$r_{10}$	0.0000	$< 0.0544$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9674	$0.9680^{+0.0087}_{-0.0087}$	$10^9 A_t$	0.000	$< 0.247$
$A_{217}^{\text{PS}}$	96.8	$98^{+20}_{-20}$	$Y_{\text{P}}$	0.245352	$0.24535^{+0.00018}_{-0.00018}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.212$
$A^{\text{kSZ}}$	0.00	$< 8.05$	$Y_{\text{P}}^{\text{BBN}}$	0.246678	$0.24667^{+0.00018}_{-0.00018}$	$f_{2000}^{143}$	29.5	$30^{+6}_{-5}$
$A_{100}^{\text{dustTT}}$	7.42	$7.4^{+3.7}_{-3.6}$	$10^5 D/\text{H}$	2.609	$2.610^{+0.076}_{-0.075}$	$f_{2000}^{143 \times 217}$	32.14	$32^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.01	$9.0^{+3.6}_{-3.6}$	$\text{Age}/\text{Gyr}$	13.802	$13.801^{+0.057}_{-0.058}$	$f_{2000}^{217}$	105.79	$105.8^{+3.9}_{-3.9}$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.2^{+8.1}_{-8.1}$	$z_*$	1089.95	$1089.95^{+0.61}_{-0.60}$	$\chi_{\text{lowTEB}}^2$	10496.5	$10498.5 (\nu: 3.7)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$r_*$	144.77	$144.80^{+0.64}_{-0.65}$	$\chi_{\text{plik}}^2$	763.5	$777.1 (\nu: 16.0)$
$c_{100}$	0.99790	$0.9979^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04115	$1.04116^{+0.00081}_{-0.00079}$	$\chi_{6\text{DF}}^2$	0.022	$0.059 (\nu: 0.0)$
$c_{217}$	0.99598	$0.9959^{+0.0029}_{-0.0028}$	$D_A/\text{Gpc}$	13.905	$13.907^{+0.062}_{-0.062}$	$\chi_{\text{MGS}}^2$	1.28	$1.39 (\nu: 0.2)$
$H_0$	67.65	$67.7^{+1.1}_{-1.1}$	$z_{\text{drag}}$	1059.63	$1059.63^{+0.92}_{-0.88}$	$\chi_{\text{DR11CMass}}^2$	2.45	$2.89 (\nu: 0.2)$
$\Omega_\Lambda$	0.6899	$0.690^{+0.015}_{-0.015}$	$r_{\text{drag}}$	147.47	$147.50^{+0.69}_{-0.70}$	$\chi_{\text{DR11LOWZ}}^2$	0.61	$0.71 (\nu: 0.2)$
$\Omega_m$	0.3101	$0.310^{+0.015}_{-0.015}$	$k_D$	0.14040	$0.14036^{+0.00089}_{-0.00088}$	$\chi_{\text{prior}}^2$	2.1	$7.3 (\nu: 6.2)$
$\Omega_m h^2$	0.14190	$0.1418^{+0.0024}_{-0.0024}$	$100\theta_D$	0.16093	$0.16094^{+0.00052}_{-0.00051}$	$\chi_{\text{CMB}}^2$	11259.9	$11275.6 (\nu: 15.8)$
$\Omega_m h^3$	0.09599	$0.09597^{+0.00092}_{-0.00091}$	$z_{\text{eq}}$	3375	$3373^{+58}_{-58}$	$\chi_{\text{BAO}}^2$	4.36	$5.0 (\nu: 0.5)$

Best-fit  $\chi_{\text{eff}}^2 = 11266.41$ ;  $\bar{\chi}_{\text{eff}}^2 = 11288.02$ ;  $R - 1 = 0.00859$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.02 MGS: 1.28 DR11CMass: 2.45 DR11LOWZ: 0.61 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.46 plik\_dx11dr2\_HM\_v18\_TT: 763.48

### 20.3 base\_r\_plikHM\_TT\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022264	$0.02226^{+0.00046}_{-0.00044}$	$\Omega_m h^3$	0.09600	$0.09597^{+0.00091}_{-0.00090}$	$100\theta_D$	0.16092	$0.16094^{+0.00053}_{-0.00052}$
$\Omega_c h^2$	0.11935	$0.1191^{+0.0041}_{-0.0039}$	$\sigma_8$	0.8279	$0.827^{+0.028}_{-0.028}$	$z_{\text{eq}}$	3384	$3377^{+92}_{-89}$
$100\theta_{\text{MC}}$	1.04089	$1.04094^{+0.00091}_{-0.00092}$	$\sigma_8 \Omega_m^{0.5}$	0.4627	$0.461^{+0.025}_{-0.024}$	$k_{\text{eq}}$	0.010329	$0.01031^{+0.00028}_{-0.00027}$
$\tau$	0.0774	$0.078^{+0.037}_{-0.037}$	$\sigma_8 \Omega_m^{0.25}$	0.6189	$0.618^{+0.025}_{-0.025}$	$100\theta_{\text{eq}}$	0.8162	$0.818^{+0.017}_{-0.017}$
$\ln(10^{10} A_s)$	3.088	$3.089^{+0.071}_{-0.071}$	$\sigma_8/h^{0.5}$	1.0078	$1.006^{+0.038}_{-0.037}$	$100\theta_{s,\text{eq}}$	0.4510	$0.4517^{+0.0089}_{-0.0088}$
$n_s$	0.9667	$0.968^{+0.012}_{-0.012}$	$\langle d^2 \rangle^{1/2}$	2.490	$2.486^{+0.088}_{-0.089}$	$r_{\text{drag}}/D_V(0.57)$	0.07153	$0.0716^{+0.0014}_{-0.0014}$
$r$	0.000	$< 0.111$	$z_{\text{re}}$	9.91	$9.9^{+3.3}_{-3.5}$	$H(0.57)$	92.95	$93.00^{+0.81}_{-0.76}$
$y_{\text{cal}}$	1.00038	$1.0004^{+0.0049}_{-0.0049}$	$10^9 A_s$	2.193	$2.20^{+0.16}_{-0.15}$	$D_A(0.57)$	1389.3	$1388^{+24}_{-24}$
$A_{217}^{\text{CIB}}$	66.5	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8789	$1.877^{+0.026}_{-0.026}$	$F_{\text{AP}}(0.57)$	0.6763	$0.6758^{+0.0064}_{-0.0061}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.05	—	$D_{40}$	1233.8	$1247^{+36}_{-35}$	$f\sigma_8(0.57)$	0.4816	$0.481^{+0.018}_{-0.018}$
$A_{143}^{\text{tSZ}}$	7.08	$5.2^{+3.7}_{-3.8}$	$D_{220}$	5719	$5717^{+80}_{-80}$	$\sigma_8(0.57)$	0.6156	$0.616^{+0.022}_{-0.021}$
$A_{100}^{\text{PS}}$	253	$257^{+50}_{-50}$	$D_{810}$	2534.6	$2534^{+27}_{-27}$	$r_{0.002}$	0.000	$< 0.105$
$A_{143}^{\text{PS}}$	39.5	$43^{+20}_{-20}$	$D_{1420}$	815.2	$815.1^{+9.8}_{-9.8}$	$r_{0.01}$	0.000	$< 0.108$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$D_{2000}$	230.56	$230.5^{+3.6}_{-3.6}$	$\ln(10^{10} A_t)$	-10.73	$-0.6^{+2.0}_{-2.5}$
$A_{217}^{\text{PS}}$	98.3	$98^{+20}_{-20}$	$n_{s,0.002}$	0.9667	$0.968^{+0.012}_{-0.012}$	$r_{10}$	0.0000	$< 0.0533$
$A^{\text{kSZ}}$	0.00	$< 8.08$	$Y_{\text{P}}$	0.245346	$0.24534^{+0.00020}_{-0.00020}$	$10^9 A_t$	0.000	$< 0.243$
$A_{100}^{\text{dustTT}}$	7.40	$7.4^{+3.7}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.246673	$0.24667^{+0.00020}_{-0.00020}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.208$
$A_{143}^{\text{dustTT}}$	9.01	$9.0^{+3.6}_{-3.6}$	$10^5 \text{D}/\text{H}$	2.611	$2.612^{+0.086}_{-0.086}$	$f_{2000}^{143}$	29.5	$30^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.2^{+8.2}_{-8.1}$	$\text{Age}/\text{Gyr}$	13.806	$13.803^{+0.072}_{-0.074}$	$f_{2000}^{143 \times 217}$	32.15	$32^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	82.2	$82^{+10}_{-10}$	$z_*$	1090.00	$1089.97^{+0.81}_{-0.80}$	$f_{2000}^{217}$	105.87	$105.8^{+4.0}_{-4.0}$
$c_{100}$	0.99790	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.68	$144.76^{+0.91}_{-0.91}$	$\chi_{\text{lowTEB}}^2$	10496.2	$10498.6 (\nu: 3.7)$
$c_{217}$	0.99591	$0.9959^{+0.0028}_{-0.0028}$	$100\theta_*$	1.04108	$1.04113^{+0.00089}_{-0.00090}$	$\chi_{\text{plik}}^2$	763.8	$777.5 (\nu: 16.5)$
$H_0$	67.48	$67.6^{+1.8}_{-1.8}$	$D_A/\text{Gpc}$	13.897	$13.904^{+0.085}_{-0.085}$	$\chi_{\text{JLA}}^2$	706.78	$706.86 (\nu: 0.1)$
$\Omega_\Lambda$	0.6876	$0.689^{+0.024}_{-0.025}$	$z_{\text{drag}}$	1059.63	$1059.62^{+0.92}_{-0.89}$	$\chi_{\text{prior}}^2$	2.0	$7.3 (\nu: 6.3)$
$\Omega_m$	0.3124	$0.311^{+0.025}_{-0.024}$	$r_{\text{drag}}$	147.38	$147.46^{+0.91}_{-0.91}$	$\chi_{\text{CMB}}^2$	11260.0	$11276.1 (\nu: 16.5)$
$\Omega_m h^2$	0.14226	$0.1420^{+0.0039}_{-0.0037}$	$k_D$	0.14048	$0.1404^{+0.0010}_{-0.0010}$			

Best-fit  $\chi_{\text{eff}}^2 = 11968.76$ ;  $\bar{\chi}_{\text{eff}}^2 = 11990.32$ ;  $R - 1 = 0.00627$

$\chi_{\text{eff}}^2$ : CMB - lowl.SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.17 plik\_dx11dr2\_HM\_v18\_TT: 763.79 SN - JLA December\_2013: 706.77

## 20.4 base\_r\_plikHM\_TT\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022286	$0.02228^{+0.00046}_{-0.00045}$	$\Omega_m h^3$	0.09605	$0.09598^{+0.00091}_{-0.00090}$	$100\theta_D$	0.16090	$0.16093^{+0.00053}_{-0.00053}$
$\Omega_c h^2$	0.11921	$0.1189^{+0.0042}_{-0.0040}$	$\sigma_8$	0.8305	$0.827^{+0.028}_{-0.028}$	$z_{\text{eq}}$	3381	$3374^{+95}_{-92}$
$100\theta_{\text{MC}}$	1.04095	$1.04096^{+0.00091}_{-0.00092}$	$\sigma_8 \Omega_m^{0.5}$	0.4634	$0.461^{+0.026}_{-0.025}$	$k_{\text{eq}}$	0.010320	$0.01030^{+0.00029}_{-0.00028}$
$\tau$	0.0813	$0.079^{+0.037}_{-0.037}$	$\sigma_8 \Omega_m^{0.25}$	0.6204	$0.617^{+0.025}_{-0.025}$	$100\theta_{\text{eq}}$	0.8168	$0.818^{+0.018}_{-0.018}$
$\ln(10^{10} A_s)$	3.095	$3.090^{+0.071}_{-0.071}$	$\sigma_8/h^{0.5}$	1.0104	$1.006^{+0.038}_{-0.037}$	$100\theta_{s,\text{eq}}$	0.4513	$0.4520^{+0.0092}_{-0.0091}$
$n_s$	0.9674	$0.968^{+0.012}_{-0.012}$	$\langle d^2 \rangle^{1/2}$	2.496	$2.485^{+0.088}_{-0.089}$	$r_{\text{drag}}/D_V(0.57)$	0.07159	$0.0717^{+0.0014}_{-0.0014}$
$r$	0.000	$< 0.113$	$z_{\text{re}}$	10.26	$9.96^{+3.3}_{-3.5}$	$H(0.57)$	92.99	$93.03^{+0.82}_{-0.78}$
$y_{\text{cal}}$	1.00028	$1.0004^{+0.0049}_{-0.0049}$	$10^9 A_s$	2.209	$2.20^{+0.16}_{-0.15}$	$D_A(0.57)$	1388.1	$1387^{+25}_{-25}$
$A_{217}^{\text{CIB}}$	66.8	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8777	$1.877^{+0.027}_{-0.027}$	$F_{\text{AP}}(0.57)$	0.6760	$0.6756^{+0.0066}_{-0.0063}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.04	—	$D_{40}$	1233.7	$1246^{+36}_{-35}$	$f\sigma_8(0.57)$	0.4828	$0.481^{+0.018}_{-0.018}$
$A_{143}^{\text{tSZ}}$	7.15	$5.2^{+3.7}_{-3.8}$	$D_{220}$	5718	$5718^{+81}_{-80}$	$\sigma_8(0.57)$	0.6179	$0.616^{+0.022}_{-0.021}$
$A_{100}^{\text{PS}}$	252	$256^{+50}_{-50}$	$D_{810}$	2533.8	$2534^{+27}_{-27}$	$r_{0.002}$	0.000	$< 0.107$
$A_{143}^{\text{PS}}$	38.4	$43^{+20}_{-20}$	$D_{1420}$	815.2	$815.2^{+9.8}_{-9.8}$	$r_{0.01}$	0.000	$< 0.110$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{2000}$	230.68	$230.6^{+3.6}_{-3.6}$	$\ln(10^{10} A_t)$	-6.13	$-0.6^{+2.1}_{-2.5}$
$A_{217}^{\text{PS}}$	97.3	$98^{+20}_{-20}$	$n_{s,0.002}$	0.9674	$0.968^{+0.012}_{-0.012}$	$r_{10}$	0.0000	$< 0.0542$
$A^{\text{kSZ}}$	0.00	$< 8.07$	$Y_{\text{P}}$	0.245356	$0.24535^{+0.00020}_{-0.00020}$	$10^9 A_t$	0.000	$< 0.247$
$A_{100}^{\text{dustTT}}$	7.48	$7.4^{+3.7}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.246682	$0.24668^{+0.00021}_{-0.00020}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.211$
$A_{143}^{\text{dustTT}}$	9.04	$9.0^{+3.6}_{-3.6}$	$10^5 \text{D}/\text{H}$	2.607	$2.609^{+0.087}_{-0.086}$	$f_{2000}^{143}$	29.2	$30^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.2^{+8.1}_{-8.1}$	$\text{Age}/\text{Gyr}$	13.802	$13.801^{+0.074}_{-0.075}$	$f_{2000}^{143 \times 217}$	31.93	$32^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$z_*$	1089.96	$1089.95^{+0.83}_{-0.81}$	$f_{2000}^{217}$	105.62	$105.8^{+4.0}_{-4.0}$
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.70	$144.78^{+0.93}_{-0.94}$	$\chi_{\text{lowTEB}}^2$	10496.5	$10498.6 (\nu: 3.8)$
$c_{217}$	0.99592	$0.9959^{+0.0028}_{-0.0028}$	$100\theta_*$	1.04114	$1.04116^{+0.00090}_{-0.00090}$	$\chi_{\text{plik}}^2$	763.5	$777.6 (\nu: 16.7)$
$H_0$	67.57	$67.7^{+1.9}_{-1.9}$	$D_A/\text{Gpc}$	13.898	$13.906^{+0.086}_{-0.087}$	$\chi_{\text{H070p6}}^2$	0.83	$0.85 (\nu: 0.1)$
$\Omega_\Lambda$	0.6887	$0.690^{+0.024}_{-0.026}$	$z_{\text{drag}}$	1059.70	$1059.64^{+0.94}_{-0.92}$	$\chi_{\text{prior}}^2$	2.0	$7.3 (\nu: 6.4)$
$\Omega_m$	0.3113	$0.310^{+0.026}_{-0.024}$	$r_{\text{drag}}$	147.39	$147.48^{+0.93}_{-0.94}$	$\chi_{\text{CMB}}^2$	11260.0	$11276.2 (\nu: 16.8)$
$\Omega_m h^2$	0.14214	$0.1419^{+0.0040}_{-0.0038}$	$k_D$	0.14048	$0.1404^{+0.0010}_{-0.0010}$			

Best-fit  $\chi_{\text{eff}}^2 = 11262.83$ ;  $\bar{\chi}_{\text{eff}}^2 = 11284.42$ ;  $R - 1 = 0.00723$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.48 plik\_dx11dr2\_HM\_v18\_TT: 763.51 Hubble - H070p6: 0.83

## 20.5 base\_r\_plikHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02224^{+0.00046}_{-0.00045}$	$\Omega_m h^3$	$0.09597^{+0.00090}_{-0.00089}$	$100\theta_D$	$0.16096^{+0.00053}_{-0.00053}$
$\Omega_c h^2$	$0.1194^{+0.0043}_{-0.0042}$	$\sigma_8$	$0.829^{+0.027}_{-0.025}$	$z_{\text{eq}}$	$3385^{+97}_{-95}$
$100\theta_{\text{MC}}$	$1.04090^{+0.00092}_{-0.00093}$	$\sigma_8 \Omega_m^{0.5}$	$0.464^{+0.026}_{-0.025}$	$k_{\text{eq}}$	$0.01033^{+0.00030}_{-0.00029}$
$\tau$	$0.078^{+0.034}_{-0.034}$	$\sigma_8 \Omega_m^{0.25}$	$0.620^{+0.025}_{-0.025}$	$100\theta_{\text{eq}}$	$0.816^{+0.018}_{-0.018}$
$\ln(10^{10} A_s)$	$3.089^{+0.066}_{-0.065}$	$\sigma_8/h^{0.5}$	$1.009^{+0.037}_{-0.036}$	$100\theta_{\text{s,eq}}$	$0.4510^{+0.0094}_{-0.0093}$
$n_s$	$0.967^{+0.012}_{-0.012}$	$\langle d^2 \rangle^{1/2}$	$2.492^{+0.087}_{-0.085}$	$r_{\text{drag}}/D_V(0.57)$	$0.0715^{+0.0015}_{-0.0014}$
$r$	$< 0.110$	$z_{\text{re}}$	$9.9^{+2.8}_{-3.3}$	$H(0.57)$	$92.94^{+0.85}_{-0.80}$
$y_{\text{cal}}$	$1.0004^{+0.0049}_{-0.0049}$	$10^9 A_s$	$2.20^{+0.15}_{-0.14}$	$D_A(0.57)$	$1390^{+26}_{-25}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.027}_{-0.027}$	$F_{\text{AP}}(0.57)$	$0.6764^{+0.0068}_{-0.0065}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1248^{+36}_{-35}$	$f\sigma_8(0.57)$	$0.482^{+0.018}_{-0.017}$
$A_{143}^{\text{tSZ}}$	$5.2^{+3.7}_{-3.8}$	$D_{220}$	$5715^{+81}_{-80}$	$\sigma_8(0.57)$	$0.616^{+0.020}_{-0.020}$
$A_{100}^{\text{PS}}$	$257^{+50}_{-50}$	$D_{810}$	$2534^{+27}_{-27}$	$r_{0.002}$	$< 0.104$
$A_{143}^{\text{PS}}$	$43^{+20}_{-20}$	$D_{1420}$	$814.9^{+9.8}_{-9.8}$	$r_{0.01}$	$< 0.107$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$D_{2000}$	$230.5^{+3.6}_{-3.6}$	$\ln(10^{10} A_t)$	$-0.6^{+2.1}_{-2.5}$
$A_{217}^{\text{PS}}$	$98^{+20}_{-20}$	$n_{\text{s},0.002}$	$0.967^{+0.012}_{-0.012}$	$r_{10}$	$< 0.0529$
$A^{\text{kSZ}}$	$< 8.08$	$Y_{\text{P}}$	$0.24533^{+0.00020}_{-0.00020}$	$10^9 A_t$	$< 0.242$
$A_{100}^{\text{dustTT}}$	$7.4^{+3.7}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24666^{+0.00021}_{-0.00021}$	$10^9 A_t e^{-2\tau}$	$< 0.207$
$A_{143}^{\text{dustTT}}$	$9.0^{+3.6}_{-3.6}$	$10^5 \text{D/H}$	$2.616^{+0.087}_{-0.086}$	$f_{2000}^{143}$	$30^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.2^{+8.1}_{-8.1}$	$\text{Age/Gyr}$	$13.808^{+0.075}_{-0.077}$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$z_*$	$1090.03^{+0.85}_{-0.84}$	$f_{2000}^{217}$	$105.9^{+4.0}_{-4.0}$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	$144.68^{+0.96}_{-0.96}$	$\chi_{\text{lowTEB}}^2$	$10498.7 (\nu: 3.6)$
$c_{217}$	$0.9959^{+0.0028}_{-0.0028}$	$100\theta_*$	$1.04109^{+0.00090}_{-0.00091}$	$\chi_{\text{plik}}^2$	$777.4 (\nu: 16.2)$
$H_0$	$67.5^{+1.9}_{-1.9}$	$D_A/\text{Gpc}$	$13.897^{+0.089}_{-0.088}$	$\chi_{\text{prior}}^2$	$7.3 (\nu: 6.3)$
$\Omega_\Lambda$	$0.687^{+0.025}_{-0.027}$	$z_{\text{drag}}$	$1059.60^{+0.97}_{-0.92}$	$\chi_{\text{CMB}}^2$	$11276.1 (\nu: 16.4)$
$\Omega_m$	$0.313^{+0.027}_{-0.025}$	$r_{\text{drag}}$	$147.39^{+0.96}_{-0.95}$		
$\Omega_m h^2$	$0.1423^{+0.0041}_{-0.0040}$	$k_D$	$0.1404^{+0.0010}_{-0.0010}$		

$$\bar{\chi}_{\text{eff}}^2 = 11283.39; R - 1 = 0.00636$$

## 20.6 base\_r\_plikHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022283	$0.02225^{+0.00031}_{-0.00030}$	$A_{143 \times 217}^{\text{dustTE}}$	0.338	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.887	$13.891^{+0.057}_{-0.057}$
$\Omega_c h^2$	0.11977	$0.1197^{+0.0028}_{-0.0028}$	$A_{217}^{\text{dustTE}}$	1.68	$1.67^{+0.50}_{-0.50}$	$z_{\text{drag}}$	1059.70	$1059.64^{+0.60}_{-0.62}$
$100\theta_{\text{MC}}$	1.04078	$1.04077^{+0.00062}_{-0.00063}$	$c_{100}$	0.99826	$0.9982^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.25	$147.30^{+0.61}_{-0.61}$
$\tau$	0.0829	$0.078^{+0.033}_{-0.033}$	$c_{217}$	0.99577	$0.9960^{+0.0028}_{-0.0028}$	$k_D$	0.14063	$0.14055^{+0.00065}_{-0.00064}$
$\ln(10^{10} A_s)$	3.101	$3.092^{+0.064}_{-0.063}$	$H_0$	67.32	$67.3^{+1.3}_{-1.2}$	$100\theta_D$	0.160864	$0.16091^{+0.00036}_{-0.00036}$
$n_s$	0.9659	$0.9652^{+0.0093}_{-0.0091}$	$\Omega_\Lambda$	0.6851	$0.685^{+0.017}_{-0.018}$	$z_{\text{eq}}$	3395	$3392^{+64}_{-63}$
$r$	0.000	$< 0.106$	$\Omega_m$	0.3149	$0.315^{+0.018}_{-0.017}$	$k_{\text{eq}}$	0.010361	$0.01035^{+0.00019}_{-0.00019}$
$y_{\text{cal}}$	1.00023	$1.0004^{+0.0049}_{-0.0049}$	$\Omega_m h^2$	0.14270	$0.1426^{+0.0027}_{-0.0026}$	$100\theta_{\text{eq}}$	0.8143	$0.815^{+0.012}_{-0.012}$
$A_{217}^{\text{CIB}}$	63.2	$64^{+10}_{-10}$	$\Omega_m h^3$	0.09606	$0.09598^{+0.00061}_{-0.00057}$	$100\theta_{s,\text{eq}}$	0.4500	$0.4502^{+0.0062}_{-0.0061}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.48	—	$\sigma_8$	0.8342	$0.830^{+0.026}_{-0.025}$	$r_{\text{drag}}/D_V(0.57)$	0.07138	$0.07140^{+0.00095}_{-0.00093}$
$A_{143}^{\text{tSZ}}$	6.88	$5.4^{+3.6}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	0.4681	$0.466^{+0.019}_{-0.019}$	$H(0.57)$	92.89	$92.88^{+0.55}_{-0.53}$
$A_{100}^{\text{PS}}$	251	$260^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6249	$0.622^{+0.021}_{-0.021}$	$D_A(0.57)$	1391.4	$1392^{+17}_{-17}$
$A_{143}^{\text{PS}}$	45.3	$43^{+10}_{-20}$	$\sigma_8/h^{0.5}$	1.0168	$1.012^{+0.032}_{-0.032}$	$F_{\text{AP}}(0.57)$	0.67689	$0.6769^{+0.0044}_{-0.0043}$
$A_{143 \times 217}^{\text{PS}}$	46.7	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.512	$2.502^{+0.078}_{-0.077}$	$f\sigma_8(0.57)$	0.4859	$0.483^{+0.015}_{-0.015}$
$A_{217}^{\text{PS}}$	103.9	$98^{+20}_{-20}$	$z_{\text{re}}$	10.41	$9.96^{+3.0}_{-3.1}$	$\sigma_8(0.57)$	0.6198	$0.617^{+0.020}_{-0.019}$
$A^{\text{kSZ}}$	0.01	$< 7.80$	$10^9 A_s$	2.222	$2.20^{+0.14}_{-0.14}$	$r_{0.002}$	0.0001	$< 0.0987$
$A_{100}^{\text{dustTT}}$	7.42	$7.4^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8826	$1.881^{+0.024}_{-0.023}$	$r_{0.01}$	0.000	$< 0.102$
$A_{143}^{\text{dustTT}}$	8.93	$8.9^{+3.6}_{-3.6}$	$D_{40}$	1239.5	$1253^{+33}_{-31}$	$\ln(10^{10} A_t)$	-6.35	$-0.7^{+2.0}_{-2.5}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.0^{+8.1}_{-8.1}$	$D_{220}$	5726	$5726^{+75}_{-75}$	$r_{10}$	0.0000	$< 0.0500$
$A_{217}^{\text{dustTT}}$	82.2	$82^{+10}_{-10}$	$D_{810}$	2537.0	$2535^{+27}_{-26}$	$10^9 A_t$	0.000	$< 0.232$
$A_{100}^{\text{dustEE}}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	815.8	$814.9^{+9.4}_{-9.4}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.199$
$A_{100 \times 143}^{\text{dustEE}}$	0.0489	$0.0483^{+0.0099}_{-0.0097}$	$D_{2000}$	230.93	$230.5^{+3.2}_{-3.2}$	$f_{2000}^{143}$	28.4	$29^{+5}_{-5}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.0999^{+0.064}_{-0.063}$	$n_{s,0.002}$	0.9659	$0.9652^{+0.0093}_{-0.0091}$	$f_{2000}^{143 \times 217}$	31.66	$32^{+4}_{-4}$
$A_{143}^{\text{dustEE}}$	0.1004	$0.0996^{+0.014}_{-0.013}$	$Y_P$	0.245355	$0.24534^{+0.00014}_{-0.00014}$	$f_{2000}^{217}$	105.12	$105.8^{+3.7}_{-3.7}$
$A_{143 \times 217}^{\text{dustEE}}$	0.222	$0.223^{+0.091}_{-0.092}$	$Y_P^{\text{BBN}}$	0.246681	$0.24666^{+0.00014}_{-0.00014}$	$\chi_{\text{lowTEB}}^2$	10497.2	$10499.2 (\nu: 3.4)$
$A_{217}^{\text{dustEE}}$	0.652	$0.65^{+0.26}_{-0.25}$	$10^5 D/H$	2.608	$2.614^{+0.058}_{-0.058}$	$\chi_{\text{plik}}^2$	2431.8	$2450.7 (\nu: 22.8)$
$A_{100}^{\text{dustTE}}$	0.140	$0.142^{+0.074}_{-0.074}$	$\text{Age/Gyr}$	13.8094	$13.813^{+0.049}_{-0.050}$	$\chi_{\text{prior}}^2$	6.6	$19.1 (\nu: 15.1)$
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.132^{+0.058}_{-0.057}$	$z_*$	1090.01	$1090.05^{+0.57}_{-0.57}$	$\chi_{\text{CMB}}^2$	12929.0	$12949.9 (\nu: 23.5)$
$A_{100 \times 217}^{\text{dustTE}}$	0.305	$0.30^{+0.16}_{-0.17}$	$r_*$	144.56	$144.60^{+0.62}_{-0.62}$			
$A_{143}^{\text{dustTE}}$	0.153	$0.16^{+0.10}_{-0.10}$	$100\theta_*$	1.04098	$1.04097^{+0.00061}_{-0.00062}$			

Best-fit  $\chi_{\text{eff}}^2 = 12935.59$ ;  $\bar{\chi}_{\text{eff}}^2 = 12968.99$ ;  $R - 1 = 0.00631$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10497.21 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.77

## 20.7 base\_r\_plikHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022317	$0.02229^{+0.00028}_{-0.00028}$	$A_{217}^{\text{dust}TE}$	1.671	$1.67^{+0.50}_{-0.49}$	$r_{\text{drag}}$	147.36	$147.40^{+0.50}_{-0.50}$
$\Omega_c h^2$	0.11922	$0.1192^{+0.0021}_{-0.0021}$	$c_{100}$	0.99819	$0.9982^{+0.0015}_{-0.0015}$	$k_D$	0.14055	$0.14048^{+0.00060}_{-0.00058}$
$100\theta_{\text{MC}}$	1.04081	$1.04084^{+0.00058}_{-0.00058}$	$c_{217}$	0.99586	$0.9960^{+0.0029}_{-0.0028}$	$100\theta_D$	0.160841	$0.16089^{+0.00035}_{-0.00034}$
$\tau$	0.0836	$0.081^{+0.031}_{-0.032}$	$H_0$	67.55	$67.55^{+0.93}_{-0.92}$	$z_{\text{eq}}$	3382.2	$3381^{+47}_{-47}$
$\ln(10^{10} A_s)$	3.101	$3.095^{+0.062}_{-0.063}$	$\Omega_\Lambda$	0.6884	$0.688^{+0.013}_{-0.013}$	$k_{\text{eq}}$	0.010323	$0.01032^{+0.00014}_{-0.00014}$
$n_s$	0.9671	$0.9665^{+0.0079}_{-0.0080}$	$\Omega_m$	0.3116	$0.312^{+0.013}_{-0.013}$	$100\theta_{\text{eq}}$	0.8167	$0.8169^{+0.0090}_{-0.0088}$
$r$	0.000	$< 0.108$	$\Omega_m h^2$	0.14218	$0.1421^{+0.0020}_{-0.0020}$	$100\theta_{s,\text{eq}}$	0.45117	$0.4513^{+0.0046}_{-0.0045}$
$y_{\text{cal}}$	1.00009	$1.0004^{+0.0049}_{-0.0049}$	$\Omega_m h^3$	0.09604	$0.09599^{+0.00062}_{-0.00058}$	$r_{\text{drag}}/D_V(0.57)$	0.07156	$0.07157^{+0.00071}_{-0.00069}$
$A_{217}^{\text{CIB}}$	64.0	$64^{+10}_{-10}$	$\sigma_8$	0.8324	$0.830^{+0.026}_{-0.025}$	$H(0.57)$	92.982	$92.97^{+0.42}_{-0.42}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.37	—	$\sigma_8 \Omega_m^{0.5}$	0.4646	$0.463^{+0.017}_{-0.017}$	$D_A(0.57)$	1388.4	$1389^{+13}_{-13}$
$A_{143}^{\text{tSZ}}$	7.02	$5.4^{+3.6}_{-3.8}$	$\sigma_8 \Omega_m^{0.25}$	0.6219	$0.620^{+0.020}_{-0.020}$	$F_{\text{AP}}(0.57)$	0.67605	$0.6760^{+0.0032}_{-0.0032}$
$A_{100}^{\text{PS}}$	252	$259^{+50}_{-50}$	$\sigma_8/h^{0.5}$	1.0128	$1.010^{+0.032}_{-0.031}$	$f\sigma_8(0.57)$	0.4840	$0.483^{+0.015}_{-0.015}$
$A_{143}^{\text{PS}}$	43.4	$43^{+10}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.503	$2.498^{+0.077}_{-0.076}$	$\sigma_8(0.57)$	0.6192	$0.618^{+0.019}_{-0.019}$
$A_{143 \times 217}^{\text{PS}}$	43.4	$40^{+20}_{-20}$	$z_{\text{re}}$	10.46	$10.2^{+2.9}_{-3.0}$	$r_{0.002}$	0.000	$< 0.101$
$A_{217}^{\text{PS}}$	102.1	$98^{+20}_{-20}$	$10^9 A_s$	2.221	$2.21^{+0.14}_{-0.14}$	$r_{0.01}$	0.000	$< 0.105$
$A^{\text{kSZ}}$	0.00	$< 7.72$	$10^9 A_s e^{-2\tau}$	1.8790	$1.879^{+0.022}_{-0.022}$	$\ln(10^{10} A_t)$	-6.08	$-0.6^{+2.0}_{-2.5}$
$A_{100}^{\text{dust}TT}$	7.31	$7.4^{+3.7}_{-3.7}$	$D_{40}$	1236.3	$1251^{+33}_{-31}$	$r_{10}$	0.0000	$< 0.0513$
$A_{143}^{\text{dust}TT}$	8.97	$8.9^{+3.6}_{-3.6}$	$D_{220}$	5725	$5727^{+75}_{-75}$	$10^9 A_t$	0.000	$< 0.238$
$A_{143 \times 217}^{\text{dust}TT}$	17.9	$17.0^{+8.2}_{-8.2}$	$D_{810}$	2534.9	$2535^{+26}_{-26}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.203$
$A_{217}^{\text{dust}TT}$	82.4	$82^{+10}_{-10}$	$D_{1420}$	815.5	$815.2^{+9.5}_{-9.3}$	$f_{2000}^{143}$	28.5	$29^{+5}_{-5}$
$A_{100}^{\text{dust}EE}$	0.0814	$0.081^{+0.011}_{-0.011}$	$D_{2000}$	230.87	$230.6^{+3.2}_{-3.1}$	$f_{2000}^{143 \times 217}$	31.66	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dust}EE}$	0.0489	$0.0485^{+0.0098}_{-0.0097}$	$n_{s,0.002}$	0.9671	$0.9665^{+0.0079}_{-0.0080}$	$f_{2000}^{217}$	105.15	$105.6^{+3.6}_{-3.6}$
$A_{100 \times 217}^{\text{dust}EE}$	0.0999	$0.100^{+0.064}_{-0.063}$	$Y_P$	0.245369	$0.24535^{+0.00012}_{-0.00013}$	$\chi_{\text{lowTEB}}^2$	10497.0	$10499.1 (\nu: 3.7)$
$A_{143}^{\text{dust}EE}$	0.1004	$0.0998^{+0.014}_{-0.013}$	$Y_P^{\text{BBN}}$	0.246696	$0.24668^{+0.00012}_{-0.00013}$	$\chi_{\text{plik}}^2$	2432.0	$2450.4 (\nu: 22.7)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.224^{+0.090}_{-0.091}$	$10^5 D/H$	2.601	$2.607^{+0.053}_{-0.052}$	$\chi_{6\text{DF}}^2$	0.037	$0.063 (\nu: 0.0)$
$A_{217}^{\text{dust}EE}$	0.654	$0.65^{+0.26}_{-0.25}$	$\text{Age/Gyr}$	13.8026	$13.805^{+0.042}_{-0.042}$	$\chi_{\text{MGS}}^2$	1.16	$1.23 (\nu: 0.1)$
$A_{100}^{\text{dust}TE}$	0.139	$0.141^{+0.074}_{-0.074}$	$z_*$	1089.918	$1089.95^{+0.47}_{-0.45}$	$\chi_{\text{DR11CMass}}^2$	2.55	$2.85 (\nu: 0.2)$
$A_{100 \times 143}^{\text{dust}TE}$	0.130	$0.132^{+0.058}_{-0.057}$	$r_*$	144.674	$144.71^{+0.49}_{-0.48}$	$\chi_{\text{DR11LOWZ}}^2$	0.75	$0.83 (\nu: 0.1)$
$A_{100 \times 217}^{\text{dust}TE}$	0.306	$0.30^{+0.16}_{-0.16}$	$100\theta_*$	1.04101	$1.04103^{+0.00057}_{-0.00058}$	$\chi_{\text{prior}}^2$	6.7	$19.2 (\nu: 15.1)$
$A_{143}^{\text{dust}TE}$	0.154	$0.16^{+0.10}_{-0.10}$	$D_A/\text{Gpc}$	13.8975	$13.900^{+0.047}_{-0.046}$	$\chi_{\text{CMB}}^2$	12929.0	$12949.5 (\nu: 23.2)$
$A_{143 \times 217}^{\text{dust}TE}$	0.338	$0.34^{+0.16}_{-0.16}$	$z_{\text{drag}}$	1059.74	$1059.68^{+0.60}_{-0.58}$	$\chi_{\text{BAO}}^2$	4.49	$4.97 (\nu: 0.4)$

Best-fit  $\chi_{\text{eff}}^2 = 12940.19$ ;  $\bar{\chi}_{\text{eff}}^2 = 12973.68$ ;  $R - 1 = 0.00847$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.04 MGS: 1.16 DR11CMass: 2.55 DR11LOWZ: 0.75 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.98 plik\_dx11dr2\_HM\_v18\_TTTEEE:  
2431.99

## 20.8 base\_r\_plikHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022279	$0.02226^{+0.00030}_{-0.00030}$	$A_{143 \times 217}^{\text{dust}TE}$	0.340	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.889	$13.894^{+0.057}_{-0.056}$
$\Omega_c h^2$	0.11967	$0.1195^{+0.0027}_{-0.0028}$	$A_{217}^{\text{dust}TE}$	1.673	$1.67^{+0.50}_{-0.50}$	$z_{\text{drag}}$	1059.70	$1059.66^{+0.62}_{-0.60}$
$100\theta_{\text{MC}}$	1.04082	$1.04079^{+0.00062}_{-0.00062}$	$c_{100}$	0.99820	$0.9982^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.28	$147.34^{+0.60}_{-0.60}$
$\tau$	0.0813	$0.079^{+0.033}_{-0.033}$	$c_{217}$	0.99598	$0.9960^{+0.0029}_{-0.0028}$	$k_D$	0.14060	$0.14052^{+0.00065}_{-0.00063}$
$\ln(10^{10} A_s)$	3.097	$3.093^{+0.063}_{-0.064}$	$H_0$	67.36	$67.4^{+1.2}_{-1.2}$	$100\theta_D$	0.160879	$0.16090^{+0.00036}_{-0.00035}$
$n_s$	0.9653	$0.9657^{+0.0092}_{-0.0091}$	$\Omega_\Lambda$	0.6857	$0.686^{+0.016}_{-0.017}$	$z_{\text{eq}}$	3392	$3388^{+61}_{-62}$
$r$	0.000	$< 0.107$	$\Omega_m$	0.3143	$0.314^{+0.017}_{-0.016}$	$k_{\text{eq}}$	0.010353	$0.01034^{+0.00019}_{-0.00019}$
$y_{\text{cal}}$	1.00013	$1.0004^{+0.0049}_{-0.0049}$	$\Omega_m h^2$	0.14259	$0.1424^{+0.0026}_{-0.0026}$	$100\theta_{\text{eq}}$	0.8148	$0.816^{+0.012}_{-0.012}$
$A_{217}^{\text{CIB}}$	66.1	$64^{+10}_{-10}$	$\Omega_m h^3$	0.09605	$0.09598^{+0.00061}_{-0.00058}$	$100\theta_{s,\text{eq}}$	0.4502	$0.4506^{+0.0061}_{-0.0059}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.13	—	$\sigma_8$	0.8321	$0.830^{+0.026}_{-0.025}$	$r_{\text{drag}}/D_V(0.57)$	0.07142	$0.07146^{+0.00092}_{-0.00091}$
$A_{143}^{\text{tSZ}}$	7.22	$5.4^{+3.6}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	0.4664	$0.465^{+0.019}_{-0.019}$	$H(0.57)$	92.91	$92.91^{+0.54}_{-0.52}$
$A_{100}^{\text{PS}}$	253	$259^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6230	$0.621^{+0.021}_{-0.021}$	$D_A(0.57)$	1390.9	$1390^{+16}_{-16}$
$A_{143}^{\text{PS}}$	39.7	$43^{+10}_{-20}$	$\sigma_8/h^{0.5}$	1.0138	$1.011^{+0.032}_{-0.032}$	$F_{\text{AP}}(0.57)$	0.67673	$0.6766^{+0.0043}_{-0.0042}$
$A_{143 \times 217}^{\text{PS}}$	36.2	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.507	$2.500^{+0.077}_{-0.078}$	$f\sigma_8(0.57)$	0.4845	$0.483^{+0.015}_{-0.015}$
$A_{217}^{\text{PS}}$	99.0	$98^{+20}_{-20}$	$z_{\text{re}}$	10.27	$10.0^{+3.0}_{-3.1}$	$\sigma_8(0.57)$	0.6183	$0.617^{+0.020}_{-0.019}$
$A^{\text{kSZ}}$	0.00	$< 7.76$	$10^9 A_s$	2.213	$2.21^{+0.14}_{-0.14}$	$r_{0.002}$	0.000	$< 0.100$
$A_{100}^{\text{dust}TT}$	7.42	$7.4^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8809	$1.881^{+0.023}_{-0.023}$	$r_{0.01}$	0.000	$< 0.104$
$A_{143}^{\text{dust}TT}$	8.87	$8.9^{+3.6}_{-3.6}$	$D_{40}$	1239.7	$1252^{+34}_{-31}$	$\ln(10^{10} A_t)$	-8.08	$-0.7^{+2.0}_{-2.5}$
$A_{143 \times 217}^{\text{dust}TT}$	17.5	$17.0^{+8.1}_{-8.2}$	$D_{220}$	5727	$5726^{+75}_{-75}$	$r_{10}$	0.0000	$< 0.0506$
$A_{217}^{\text{dust}TT}$	81.9	$82^{+10}_{-10}$	$D_{810}$	2534.8	$2535^{+27}_{-26}$	$10^9 A_t$	0.000	$< 0.235$
$A_{100}^{\text{dust}EE}$	0.0811	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	814.8	$815.0^{+9.5}_{-9.4}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.201$
$A_{100 \times 143}^{\text{dust}EE}$	0.0490	$0.0484^{+0.0099}_{-0.0097}$	$D_{2000}$	230.53	$230.5^{+3.2}_{-3.2}$	$f_{2000}^{143}$	29.0	$29^{+5}_{-5}$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.100^{+0.064}_{-0.064}$	$n_{s,0.002}$	0.9653	$0.9657^{+0.0092}_{-0.0091}$	$f_{2000}^{143 \times 217}$	32.03	$32^{+4}_{-4}$
$A_{143}^{\text{dust}EE}$	0.1003	$0.0997^{+0.013}_{-0.013}$	$Y_P$	0.245353	$0.24534^{+0.00014}_{-0.00014}$	$f_{2000}^{217}$	105.66	$105.7^{+3.6}_{-3.6}$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.224^{+0.090}_{-0.092}$	$Y_P^{\text{BBN}}$	0.246679	$0.24667^{+0.00014}_{-0.00014}$	$\chi_{\text{lowTEB}}^2$	10497.1	$10499.1 (\nu: 3.5)$
$A_{217}^{\text{dust}EE}$	0.649	$0.65^{+0.26}_{-0.25}$	$10^5 D/H$	2.609	$2.611^{+0.058}_{-0.057}$	$\chi_{\text{plik}}^2$	2431.5	$2450.7 (\nu: 22.7)$
$A_{100}^{\text{dust}TE}$	0.141	$0.142^{+0.074}_{-0.074}$	$\text{Age}/\text{Gyr}$	13.8084	$13.810^{+0.048}_{-0.050}$	$\chi_{\text{JLA}}^2$	706.83	$706.87 (\nu: 0.0)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.058}_{-0.057}$	$z_*$	1090.01	$1090.01^{+0.56}_{-0.55}$	$\chi_{\text{prior}}^2$	7.0	$19.1 (\nu: 15.1)$
$A_{100 \times 217}^{\text{dust}TE}$	0.305	$0.30^{+0.16}_{-0.16}$	$r_*$	144.59	$144.64^{+0.60}_{-0.61}$	$\chi_{\text{CMB}}^2$	12928.6	$12949.8 (\nu: 23.5)$
$A_{143}^{\text{dust}TE}$	0.153	$0.16^{+0.10}_{-0.10}$	$100\theta_*$	1.04101	$1.04099^{+0.00061}_{-0.00062}$			

Best-fit  $\chi_{\text{eff}}^2 = 13642.42$ ;  $\bar{\chi}_{\text{eff}}^2 = 13675.83$ ;  $R - 1 = 0.00659$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10497.13 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.47 SN - JLA December\_2013: 706.84



## 20.9 base\_r\_plikHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022279	$0.02227^{+0.00031}_{-0.00030}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.892	$13.895^{+0.057}_{-0.057}$
$\Omega_c h^2$	0.11956	$0.1195^{+0.0028}_{-0.0028}$	$A_{217}^{\text{dust}TE}$	1.669	$1.67^{+0.50}_{-0.49}$	$z_{\text{drag}}$	1059.70	$1059.67^{+0.61}_{-0.61}$
$100\theta_{\text{MC}}$	1.04079	$1.04080^{+0.00062}_{-0.00063}$	$c_{100}$	0.99821	$0.9982^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.31	$147.35^{+0.60}_{-0.61}$
$\tau$	0.0822	$0.080^{+0.033}_{-0.033}$	$c_{217}$	0.99591	$0.9960^{+0.0029}_{-0.0028}$	$k_D$	0.14057	$0.14052^{+0.00065}_{-0.00063}$
$\ln(10^{10} A_s)$	3.099	$3.093^{+0.063}_{-0.064}$	$H_0$	67.39	$67.4^{+1.2}_{-1.2}$	$100\theta_D$	0.160878	$0.16090^{+0.00036}_{-0.00035}$
$n_s$	0.9659	$0.9658^{+0.0092}_{-0.0092}$	$\Omega_\Lambda$	0.6862	$0.687^{+0.017}_{-0.017}$	$z_{\text{eq}}$	3390	$3387^{+62}_{-62}$
$r$	0.000	$< 0.107$	$\Omega_m$	0.3138	$0.313^{+0.017}_{-0.017}$	$k_{\text{eq}}$	0.010345	$0.01034^{+0.00019}_{-0.00019}$
$y_{\text{cal}}$	1.00024	$1.0004^{+0.0049}_{-0.0049}$	$\Omega_m h^2$	0.14249	$0.1424^{+0.0026}_{-0.0026}$	$100\theta_{\text{eq}}$	0.8152	$0.816^{+0.012}_{-0.012}$
$A_{217}^{\text{CIB}}$	64.8	$64^{+10}_{-10}$	$\Omega_m h^3$	0.09602	$0.09599^{+0.00062}_{-0.00058}$	$100\theta_{s,\text{eq}}$	0.4504	$0.4507^{+0.0061}_{-0.0060}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.31	—	$\sigma_8$	0.8326	$0.830^{+0.026}_{-0.025}$	$r_{\text{drag}}/D_V(0.57)$	0.07144	$0.07148^{+0.00094}_{-0.00092}$
$A_{143}^{\text{tSZ}}$	7.02	$5.4^{+3.6}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	0.4664	$0.465^{+0.019}_{-0.019}$	$H(0.57)$	92.91	$92.92^{+0.55}_{-0.52}$
$A_{100}^{\text{PS}}$	253	$259^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6232	$0.621^{+0.021}_{-0.021}$	$D_A(0.57)$	1390.5	$1390^{+17}_{-17}$
$A_{143}^{\text{PS}}$	43.0	$43^{+10}_{-20}$	$\sigma_8/h^{0.5}$	1.0143	$1.011^{+0.032}_{-0.032}$	$F_{\text{AP}}(0.57)$	0.67660	$0.6765^{+0.0043}_{-0.0042}$
$A_{143 \times 217}^{\text{PS}}$	41.8	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.507	$2.500^{+0.078}_{-0.077}$	$f\sigma_8(0.57)$	0.4847	$0.483^{+0.015}_{-0.015}$
$A_{217}^{\text{PS}}$	101.3	$98^{+20}_{-20}$	$z_{\text{re}}$	10.35	$10.1^{+3.0}_{-3.1}$	$\sigma_8(0.57)$	0.6189	$0.617^{+0.020}_{-0.019}$
$A^{\text{kSZ}}$	0.00	$< 7.75$	$10^9 A_s$	2.217	$2.21^{+0.14}_{-0.14}$	$r_{0.002}$	0.000	$< 0.100$
$A_{100}^{\text{dust}TT}$	7.37	$7.4^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8810	$1.880^{+0.023}_{-0.023}$	$r_{0.01}$	0.000	$< 0.104$
$A_{143}^{\text{dust}TT}$	8.86	$8.9^{+3.6}_{-3.6}$	$D_{40}$	1238.6	$1252^{+34}_{-31}$	$\ln(10^{10} A_t)$	-8.01	$-0.6^{+2.0}_{-2.5}$
$A_{143 \times 217}^{\text{dust}TT}$	17.8	$17.0^{+8.1}_{-8.2}$	$D_{220}$	5726	$5727^{+75}_{-75}$	$r_{10}$	0.0000	$< 0.0506$
$A_{217}^{\text{dust}TT}$	82.1	$82^{+10}_{-10}$	$D_{810}$	2535.7	$2535^{+26}_{-26}$	$10^9 A_t$	0.000	$< 0.235$
$A_{100}^{\text{dust}EE}$	0.0811	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	815.3	$815.0^{+9.5}_{-9.4}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.201$
$A_{100 \times 143}^{\text{dust}EE}$	0.0490	$0.0484^{+0.0099}_{-0.0097}$	$D_{2000}$	230.72	$230.6^{+3.2}_{-3.2}$	$f_{2000}^{143}$	28.8	$29^{+5}_{-5}$
$A_{100 \times 217}^{\text{dust}EE}$	0.0996	$0.100^{+0.064}_{-0.064}$	$n_{s,0.002}$	0.9659	$0.9658^{+0.0092}_{-0.0092}$	$f_{2000}^{143 \times 217}$	31.89	$32^{+4}_{-4}$
$A_{143}^{\text{dust}EE}$	0.1004	$0.0997^{+0.013}_{-0.013}$	$Y_P$	0.245353	$0.24535^{+0.00014}_{-0.00014}$	$f_{2000}^{217}$	105.43	$105.7^{+3.6}_{-3.6}$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.224^{+0.091}_{-0.092}$	$Y_P^{\text{BBN}}$	0.246679	$0.24667^{+0.00014}_{-0.00014}$	$\chi_{\text{lowTEB}}^2$	10497.1	$10499.1 (\nu: 3.6)$
$A_{217}^{\text{dust}EE}$	0.651	$0.65^{+0.26}_{-0.25}$	$10^5 D/H$	2.609	$2.610^{+0.058}_{-0.057}$	$\chi_{\text{plik}}^2$	2431.8	$2450.7 (\nu: 22.8)$
$A_{100}^{\text{dust}TE}$	0.141	$0.142^{+0.074}_{-0.074}$	$\text{Age}/\text{Gyr}$	13.8086	$13.809^{+0.049}_{-0.050}$	$\chi_{\text{H070p6}}^2$	0.93	$0.94 (\nu: 0.1)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.058}_{-0.057}$	$z_*$	1090.00	$1090.00^{+0.57}_{-0.56}$	$\chi_{\text{prior}}^2$	6.7	$19.1 (\nu: 15.1)$
$A_{100 \times 217}^{\text{dust}TE}$	0.300	$0.30^{+0.16}_{-0.16}$	$r_*$	144.61	$144.65^{+0.61}_{-0.62}$	$\chi_{\text{CMB}}^2$	12928.8	$12949.9 (\nu: 23.6)$
$A_{143}^{\text{dust}TE}$	0.153	$0.16^{+0.10}_{-0.10}$	$100\theta_*$	1.04099	$1.04100^{+0.00061}_{-0.00062}$			

Best-fit  $\chi_{\text{eff}}^2 = 12936.47$ ;  $\bar{\chi}_{\text{eff}}^2 = 12969.93$ ;  $R - 1 = 0.00665$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10497.06 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.78 Hubble - H070p6: 0.93

20.10 base\_r\_plikHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02225^{+0.00031}_{-0.00030}$	$A_{143 \times 217}^{\text{dustTE}}$	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	$13.891^{+0.057}_{-0.057}$
$\Omega_c h^2$	$0.1197^{+0.0028}_{-0.0028}$	$A_{217}^{\text{dustTE}}$	$1.67^{+0.50}_{-0.49}$	$z_{\text{drag}}$	$1059.64^{+0.64}_{-0.61}$
$100\theta_{\text{MC}}$	$1.04078^{+0.00063}_{-0.00063}$	$c_{100}$	$0.9982^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	$147.31^{+0.61}_{-0.61}$
$\tau$	$0.079^{+0.031}_{-0.032}$	$c_{217}$	$0.9960^{+0.0028}_{-0.0028}$	$k_D$	$0.14055^{+0.00065}_{-0.00064}$
$\ln(10^{10} A_s)$	$3.093^{+0.061}_{-0.062}$	$H_0$	$67.3^{+1.3}_{-1.2}$	$100\theta_D$	$0.16091^{+0.00036}_{-0.00035}$
$n_s$	$0.9653^{+0.0093}_{-0.0091}$	$\Omega_\Lambda$	$0.685^{+0.017}_{-0.017}$	$z_{\text{eq}}$	$3392^{+64}_{-63}$
$r$	$< 0.106$	$\Omega_m$	$0.315^{+0.017}_{-0.017}$	$k_{\text{eq}}$	$0.01035^{+0.00019}_{-0.00019}$
$y_{\text{cal}}$	$1.0004^{+0.0049}_{-0.0049}$	$\Omega_m h^2$	$0.1426^{+0.0027}_{-0.0026}$	$100\theta_{\text{eq}}$	$0.815^{+0.012}_{-0.012}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$\Omega_m h^3$	$0.09598^{+0.00061}_{-0.00057}$	$100\theta_{\text{s,eq}}$	$0.4502^{+0.0062}_{-0.0061}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\sigma_8$	$0.830^{+0.025}_{-0.025}$	$r_{\text{drag}}/D_V(0.57)$	$0.07140^{+0.00095}_{-0.00092}$
$A_{143}^{\text{tSZ}}$	$5.4^{+3.6}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	$0.466^{+0.019}_{-0.019}$	$H(0.57)$	$92.88^{+0.55}_{-0.52}$
$A_{100}^{\text{PS}}$	$259^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	$0.622^{+0.021}_{-0.020}$	$D_A(0.57)$	$1392^{+17}_{-17}$
$A_{143}^{\text{PS}}$	$43^{+10}_{-20}$	$\sigma_8/h^{0.5}$	$1.012^{+0.032}_{-0.031}$	$F_{\text{AP}}(0.57)$	$0.6768^{+0.0044}_{-0.0043}$
$A_{143 \times 217}^{\text{PS}}$	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	$2.503^{+0.076}_{-0.073}$	$f\sigma_8(0.57)$	$0.484^{+0.015}_{-0.015}$
$A_{217}^{\text{PS}}$	$98^{+20}_{-20}$	$z_{\text{re}}$	$10.0^{+2.7}_{-2.8}$	$\sigma_8(0.57)$	$0.617^{+0.019}_{-0.019}$
$A^{\text{kSZ}}$	$< 7.74$	$10^9 A_s$	$2.20^{+0.14}_{-0.14}$	$r_{0.002}$	$< 0.0992$
$A_{100}^{\text{dustTT}}$	$7.4^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.024}_{-0.023}$	$r_{0.01}$	$< 0.103$
$A_{143}^{\text{dustTT}}$	$8.9^{+3.6}_{-3.6}$	$D_{40}$	$1253^{+34}_{-31}$	$\ln(10^{10} A_t)$	$-0.7^{+2.0}_{-2.5}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.0^{+8.1}_{-8.2}$	$D_{220}$	$5726^{+75}_{-75}$	$r_{10}$	$< 0.0502$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$D_{810}$	$2535^{+27}_{-26}$	$10^9 A_t$	$< 0.233$
$A_{100}^{\text{dustEE}}$	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	$814.9^{+9.5}_{-9.4}$	$10^9 A_t e^{-2\tau}$	$< 0.200$
$A_{100 \times 143}^{\text{dustEE}}$	$0.0483^{+0.0099}_{-0.0096}$	$D_{2000}$	$230.5^{+3.2}_{-3.2}$	$f_{2000}^{143}$	$29^{+5}_{-5}$
$A_{100 \times 217}^{\text{dustEE}}$	$0.100^{+0.064}_{-0.064}$	$n_{\text{s},0.002}$	$0.9653^{+0.0093}_{-0.0091}$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$
$A_{143}^{\text{dustEE}}$	$0.0996^{+0.013}_{-0.013}$	$Y_{\text{P}}$	$0.24534^{+0.00014}_{-0.00014}$	$f_{2000}^{217}$	$105.8^{+3.6}_{-3.6}$
$A_{143 \times 217}^{\text{dustEE}}$	$0.224^{+0.090}_{-0.092}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24667^{+0.00014}_{-0.00014}$	$\chi_{\text{lowTEB}}^2$	$10499.2 (\nu: 3.4)$
$A_{217}^{\text{dustEE}}$	$0.65^{+0.26}_{-0.25}$	$10^5 \text{D}/\text{H}$	$2.614^{+0.058}_{-0.058}$	$\chi_{\text{plik}}^2$	$2450.6 (\nu: 22.4)$
$A_{100}^{\text{dustTE}}$	$0.142^{+0.073}_{-0.074}$	$\text{Age}/\text{Gyr}$	$13.812^{+0.049}_{-0.051}$	$\chi_{\text{prior}}^2$	$19.1 (\nu: 15.2)$
$A_{100 \times 143}^{\text{dustTE}}$	$0.132^{+0.058}_{-0.057}$	$z_*$	$1090.04^{+0.57}_{-0.56}$	$\chi_{\text{CMB}}^2$	$12949.8 (\nu: 23.3)$
$A_{100 \times 217}^{\text{dustTE}}$	$0.30^{+0.16}_{-0.16}$	$r_*$	$144.60^{+0.62}_{-0.61}$		
$A_{143}^{\text{dustTE}}$	$0.16^{+0.10}_{-0.10}$	$100\theta_*$	$1.04097^{+0.00061}_{-0.00062}$		

$$\bar{\chi}_{\text{eff}}^2 = 12968.88; R - 1 = 0.00728$$

## 20.11 base\_r\_CamSpecHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022224	$0.02225^{+0.00044}_{-0.00045}$ (+0.0 $\sigma$ )	$\Omega_\Lambda$	0.6867	$0.688^{+0.025}_{-0.027}$ (+0.1 $\sigma$ )	$k_D$	0.14046	$0.1404^{+0.0010}_{-0.0010}$ (−0.0 $\sigma$ )
$\Omega_c h^2$	0.11951	$0.1193^{+0.0043}_{-0.0041}$ (−0.1 $\sigma$ )	$\Omega_m$	0.3133	$0.312^{+0.027}_{-0.025}$ (−0.1 $\sigma$ )	$100\theta_D$	0.16096	$0.16094^{+0.00053}_{-0.00051}$ (−0.1 $\sigma$ )
$100\theta_{MC}$	1.04093	$1.04095^{+0.00093}_{-0.00093}$ (+0.1 $\sigma$ )	$\Omega_m h^2$	0.14238	$0.1421^{+0.0040}_{-0.0039}$ (−0.1 $\sigma$ )	$z_{eq}$	3387	$3381^{+96}_{-93}$ (−0.1 $\sigma$ )
$\tau$	0.0780	$0.078^{+0.038}_{-0.037}$ (+0.1 $\sigma$ )	$\Omega_m h^3$	0.09598	$0.09598^{+0.00089}_{-0.00088}$ (+0.0 $\sigma$ )	$100\theta_{eq}$	0.8156	$0.817^{+0.018}_{-0.018}$ (+0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.087	$3.086^{+0.072}_{-0.070}$ (−0.0 $\sigma$ )	$\sigma_8$	0.8288	$0.827^{+0.029}_{-0.028}$ (−0.0 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07149	$0.0716^{+0.0014}_{-0.0014}$ (+0.1 $\sigma$ )
$n_s$	0.9677	$0.969^{+0.012}_{-0.012}$ (+0.4 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4639	$0.462^{+0.027}_{-0.026}$ (−0.1 $\sigma$ )	$H(0.57)$	92.91	$92.97^{+0.82}_{-0.80}$ (+0.1 $\sigma$ )
$r$	0.000	< 0.111 (+0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6201	$0.618^{+0.026}_{-0.026}$ (−0.1 $\sigma$ )	$D_A(0.57)$	1390.3	$1389^{+26}_{-25}$ (−0.1 $\sigma$ )
$y_{cal}$	1.00035	$1.0003^{+0.0049}_{-0.0048}$ (−0.1 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0094	$1.007^{+0.039}_{-0.038}$ (−0.1 $\sigma$ )	$F_{AP}(0.57)$	0.6765	$0.6761^{+0.0067}_{-0.0064}$ (−0.1 $\sigma$ )
$A_{100}^{PS}$	246.7	$244^{+40}_{-50}$ (−0.5 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.489	$2.481^{+0.091}_{-0.090}$ (−0.2 $\sigma$ )	$f\sigma_8(0.57)$	0.4823	$0.481^{+0.019}_{-0.018}$ (−0.1 $\sigma$ )
$A_{143}^{PS}$	35.9	$39^{+20}_{-20}$ (−0.6 $\sigma$ )	$z_{re}$	9.99	$9.9^{+3.2}_{-3.5}$ (+0.1 $\sigma$ )	$\sigma_8(0.57)$	0.6161	$0.615^{+0.022}_{-0.021}$ (+0.0 $\sigma$ )
$A_{217}^{PS}$	97.7	$99^{+30}_{-30}$ (+0.1 $\sigma$ )	$10^9 A_s$	2.192	$2.19^{+0.16}_{-0.15}$ (−0.0 $\sigma$ )	$r_{0.002}$	0.000	< 0.105 (+0.0 $\sigma$ )
$A_{217}^{CIB}$	47.6	$46^{+10}_{-10}$ (−2.7 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.8754	$1.874^{+0.028}_{-0.027}$ (−0.4 $\sigma$ )	$r_{0.01}$	0.000	< 0.108 (+0.0 $\sigma$ )
$A_{143}^{tSZ}$	3.86	< 6.66 (−1.0 $\sigma$ )	$D_{40}$	1228.3	$1240^{+36}_{-35}$ (−0.5 $\sigma$ )	$\ln(10^{10} A_t)$	−8.16	$−0.7^{+2.1}_{-2.5}$ (−0.0 $\sigma$ )
$r_{143 \times 217}^{PS}$	0.442	$0.52^{+0.23}_{-0.21}$	$D_{220}$	5696	$5693^{+81}_{-79}$ (−0.5 $\sigma$ )	$r_{10}$	0.0000	< 0.0534 (+0.0 $\sigma$ )
$\xi^{tSZ \times CIB}$	0.00	—	$D_{810}$	2530.5	$2530^{+27}_{-27}$ (−0.3 $\sigma$ )	$10^9 A_t$	0.000	< 0.242 (+0.0 $\sigma$ )
$A^{kSZ}$	3.8	—	$D_{1420}$	814.3	$815^{+10}_{-9.9}$ (−0.0 $\sigma$ )	$10^9 A_t e^{-2\tau}$	0.000	< 0.208 (+0.0 $\sigma$ )
$A_{100}^{dust}$	0.984	$0.98^{+0.38}_{-0.38}$	$n_{s,0.002}$	0.9677	$0.969^{+0.012}_{-0.012}$ (+0.4 $\sigma$ )	$Y_P^{BBN}$	0.246239	$0.24625^{+0.00019}_{-0.00020}$ (−3.8 $\sigma$ )
$A_{143}^{dust}$	1.026	$1.02^{+0.36}_{-0.36}$	$Y_P$	0.244910	$0.24492^{+0.00019}_{-0.00019}$ (−3.8 $\sigma$ )	$f_{2000}^{143}$	28.9	$29^{+6}_{-6}$ (−0.4 $\sigma$ )
$A_{217}^{dust}$	1.216	$1.22^{+0.23}_{-0.23}$	Age/Gyr	13.810	$13.805^{+0.076}_{-0.075}$ (−0.1 $\sigma$ )	$f_{2000}^{217}$	106.45	$106.2^{+4.0}_{-4.0}$ (+0.1 $\sigma$ )
$A_{143 \times 217}^{dust}$	0.975	$0.98^{+0.35}_{-0.35}$	$z_*$	1090.05	$1090.00^{+0.86}_{-0.80}$ (−0.1 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.63	$31^{+4}_{-4}$ (−0.4 $\sigma$ )
$c_{100}$	0.99673	$0.9968^{+0.0019}_{-0.0019}$ (−1.4 $\sigma$ )	$r_*$	144.67	$144.72^{+0.95}_{-0.95}$ (+0.1 $\sigma$ )	$\chi_{lowTEB}^2$	10495.8	$10497.9 (\nu: 3.4)$ (−0.3 $\sigma$ )
$c_{217}$	0.99728	$0.9972^{+0.0035}_{-0.0034}$ (+0.9 $\sigma$ )	$100\theta_*$	1.04114	$1.04116^{+0.00091}_{-0.00091}$ (+0.2 $\sigma$ )	$\chi_{CamSpec}^2$	8045.3	$8060.0 (\nu: 17.5)$
$\beta_1^1$	−0.07	$−0.1^{+1.9}_{-1.9}$	$z_{drag}$	1059.55	$1059.58^{+0.92}_{-0.91}$ (−0.0 $\sigma$ )	$\chi_{prior}^2$	3.4	$8.5 (\nu: 6.2)$ (+0.3 $\sigma$ )
$H_0$	67.41	$67.5^{+1.9}_{-1.9}$ (+0.1 $\sigma$ )	$r_{drag}$	147.38	$147.43^{+0.94}_{-0.94}$ (+0.1 $\sigma$ )	$\chi_{CMB}^2$	18541.1	$18557.9 (\nu: 18.1)$ (+1262.1 $\sigma$ )

Best-fit  $\chi_{eff}^2 = 18544.48$ ;  $\Delta\chi_{eff}^2 = 7282.54$ ;  $\bar{\chi}_{eff}^2 = 18566.40$ ;  $\Delta\bar{\chi}_{eff}^2 = 7282.84$ ;  $R - 1 = 0.00738$

$\chi_{eff}^2$ : CMB - lowl.SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.78 ( $\Delta$  -0.72) CamSpec like.v9.10CMH\_unified: 8045.33

## 20.12 base\_r\_CamSpecHM\_TT\_lowTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02227^{+0.00039}_{-0.00038} \quad (+0.0\sigma)$	$\Omega_m h^2$	$0.1417^{+0.0024}_{-0.0024} \quad (-0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07172^{+0.00085}_{-0.00084} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1188^{+0.0025}_{-0.0025} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.09598^{+0.00091}_{-0.00089} \quad (+0.0\sigma)$	$H(0.57)$	$93.04^{+0.54}_{-0.53} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04100^{+0.00081}_{-0.00081} \quad (+0.1\sigma)$	$\sigma_8$	$0.827^{+0.029}_{-0.028} \quad (-0.0\sigma)$	$D_A(0.57)$	$1386^{+15}_{-15} \quad (-0.1\sigma)$
$\tau$	$0.079^{+0.035}_{-0.035} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.020}_{-0.020} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6754^{+0.0039}_{-0.0038} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.087^{+0.069}_{-0.069} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.617^{+0.024}_{-0.023} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.480^{+0.018}_{-0.017} \quad (-0.0\sigma)$
$n_s$	$0.9700^{+0.0089}_{-0.0089} \quad (+0.4\sigma)$	$\sigma_8/h^{0.5}$	$1.005^{+0.036}_{-0.036} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.616^{+0.022}_{-0.021} \quad (-0.0\sigma)$
$r$	$< 0.110 \quad (-0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.477^{+0.084}_{-0.084} \quad (-0.2\sigma)$	$r_{0.002}$	$< 0.105 \quad (-0.0\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0047} \quad (-0.1\sigma)$	$z_{\text{re}}$	$9.98^{+3.2}_{-3.2} \quad (+0.0\sigma)$	$r_{0.01}$	$< 0.108 \quad (-0.0\sigma)$
$A_{100}^{\text{PS}}$	$244^{+40}_{-40} \quad (-0.4\sigma)$	$10^9 A_s$	$2.19^{+0.15}_{-0.15} \quad (-0.1\sigma)$	$\ln(10^{10} A_t)$	$-0.6^{+2.1}_{-2.5} \quad (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-20} \quad (-0.6\sigma)$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.023}_{-0.022} \quad (-0.4\sigma)$	$r_{10}$	$< 0.0532 \quad (-0.0\sigma)$
$A_{217}^{\text{PS}}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$D_{40}$	$1238^{+34}_{-33} \quad (-0.5\sigma)$	$10^9 A_t$	$< 0.240 \quad (-0.0\sigma)$
$A_{217}^{\text{CIB}}$	$45^{+10}_{-10} \quad (-2.7\sigma)$	$D_{220}$	$5694^{+81}_{-79} \quad (-0.6\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.207 \quad (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.66 \quad (-1.0\sigma)$	$D_{810}$	$2530^{+28}_{-26} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24626^{+0.00017}_{-0.00017} \quad (-4.5\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.21}$	$D_{1420}$	$815^{+10}_{-9.6} \quad (-0.1\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-6} \quad (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$n_{s,0.002}$	$0.9700^{+0.0089}_{-0.0089} \quad (+0.4\sigma)$	$f_{2000}^{217}$	$106.1^{+3.9}_{-3.9} \quad (+0.2\sigma)$
$A^{\text{kSZ}}$	—	$Y_{\text{P}}$	$0.24493^{+0.00017}_{-0.00016} \quad (-4.5\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.37}_{-0.38}$	$\text{Age/Gyr}$	$13.800^{+0.056}_{-0.057} \quad (-0.1\sigma)$	$\chi_{\text{lowTEB}}^2$	$10497.7 \quad (\nu: 3.4) \quad (-0.3\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$z_*$	$1089.92^{+0.60}_{-0.59} \quad (-0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8059.6 \quad (\nu: 16.5)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$r_*$	$144.81^{+0.63}_{-0.63} \quad (+0.0\sigma)$	$\chi_{6\text{DF}}^2$	$0.055 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$100\theta_*$	$1.04121^{+0.00080}_{-0.00080} \quad (+0.1\sigma)$	$\chi_{\text{MGS}}^2$	$1.42 \quad (\nu: 0.2) \quad (+0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$z_{\text{drag}}$	$1059.61^{+0.85}_{-0.86} \quad (-0.0\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.87 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$c_{217}$	$0.9972^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$r_{\text{drag}}$	$147.51^{+0.68}_{-0.68} \quad (+0.0\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.67 \quad (\nu: 0.2) \quad (-0.1\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$k_{\text{D}}$	$0.14037^{+0.00088}_{-0.00087} \quad (+0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.5 \quad (\nu: 6.3) \quad (+0.3\sigma)$
$H_0$	$67.7^{+1.1}_{-1.1} \quad (+0.1\sigma)$	$100\theta_{\text{D}}$	$0.16093^{+0.00050}_{-0.00050} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18557.3 \quad (\nu: 16.4) \quad (+1293.4\sigma)$
$\Omega_{\Lambda}$	$0.691^{+0.015}_{-0.015} \quad (+0.1\sigma)$	$z_{\text{eq}}$	$3372^{+58}_{-57} \quad (-0.0\sigma)$	$\chi_{\text{BAO}}^2$	$5.02 \quad (\nu: 0.5) \quad (-0.0\sigma)$
$\Omega_{\text{m}}$	$0.309^{+0.015}_{-0.015} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.819^{+0.011}_{-0.011} \quad (+0.0\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18570.77; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.75; R - 1 = 0.01022$$

### 20.13 base\_r\_CamSpecHM\_TT\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02227^{+0.00043}_{-0.00043} \quad (+0.0\sigma)$	$\Omega_m$	$0.310^{+0.025}_{-0.023} \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3373^{+92}_{-87} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1189^{+0.0040}_{-0.0038} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1418^{+0.0038}_{-0.0037} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.818^{+0.017}_{-0.017} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04099^{+0.00090}_{-0.00091} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.09598^{+0.00090}_{-0.00088} \quad (+0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0717^{+0.0013}_{-0.0013} \quad (+0.1\sigma)$
$\tau$	$0.079^{+0.038}_{-0.036} \quad (+0.0\sigma)$	$\sigma_8$	$0.827^{+0.029}_{-0.028} \quad (-0.0\sigma)$	$H(0.57)$	$93.03^{+0.77}_{-0.75} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.088^{+0.072}_{-0.070} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.026}_{-0.024} \quad (-0.1\sigma)$	$D_A(0.57)$	$1387^{+23}_{-23} \quad (-0.1\sigma)$
$n_s$	$0.970^{+0.012}_{-0.012} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.617^{+0.026}_{-0.025} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6755^{+0.0062}_{-0.0059} \quad (-0.1\sigma)$
$r$	$< 0.112 \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$1.005^{+0.039}_{-0.038} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.480^{+0.019}_{-0.018} \quad (-0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0048} \quad (-0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.478^{+0.090}_{-0.088} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.616^{+0.022}_{-0.021} \quad (+0.0\sigma)$
$A_{100}^{\text{PS}}$	$244^{+40}_{-50} \quad (-0.4\sigma)$	$z_{\text{re}}$	$9.97^{+3.1}_{-3.5} \quad (+0.0\sigma)$	$r_{0.002}$	$< 0.106 \quad (+0.0\sigma)$
$A_{143}^{\text{PS}}$	$38^{+20}_{-20} \quad (-0.6\sigma)$	$10^9 A_s$	$2.19^{+0.16}_{-0.15} \quad (-0.0\sigma)$	$r_{0.01}$	$< 0.109 \quad (+0.0\sigma)$
$A_{217}^{\text{PS}}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.027}_{-0.026} \quad (-0.4\sigma)$	$\ln(10^{10} A_t)$	$-0.6^{+2.1}_{-2.5} \quad (-0.0\sigma)$
$A_{217}^{\text{CIB}}$	$45^{+10}_{-10} \quad (-2.7\sigma)$	$D_{40}$	$1238^{+35}_{-35} \quad (-0.5\sigma)$	$r_{10}$	$< 0.0536 \quad (+0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.68 \quad (-1.0\sigma)$	$D_{220}$	$5694^{+82}_{-79} \quad (-0.6\sigma)$	$10^9 A_t$	$< 0.243 \quad (-0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.21}$	$D_{810}$	$2530^{+27}_{-27} \quad (-0.3\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.209 \quad (-0.0\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{1420}$	$815^{+10}_{-9.9} \quad (-0.0\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24626^{+0.00018}_{-0.00019} \quad (-4.0\sigma)$
$A^{\text{kSZ}}$	—	$n_{\text{s},0.002}$	$0.970^{+0.012}_{-0.012} \quad (+0.4\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-6} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.37}_{-0.38}$	$Y_{\text{P}}$	$0.24493^{+0.00019}_{-0.00018} \quad (-4.0\sigma)$	$f_{2000}^{217}$	$106.1^{+4.0}_{-4.0} \quad (+0.2\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$\text{Age}/\text{Gyr}$	$13.800^{+0.071}_{-0.072} \quad (-0.1\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$z_*$	$1089.93^{+0.80}_{-0.75} \quad (-0.1\sigma)$	$\chi_{\text{lowTEB}}^2$	$10497.8 \quad (\nu: 3.5) \quad (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$r_*$	$144.80^{+0.90}_{-0.91} \quad (+0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8060.0 \quad (\nu: 17.5)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$100\theta_*$	$1.04120^{+0.00089}_{-0.00090} \quad (+0.1\sigma)$	$\chi_{\text{JLA}}^2$	$706.82 \quad (\nu: 0.1) \quad (-0.1\sigma)$
$c_{217}$	$0.9972^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$z_{\text{drag}}$	$1059.61^{+0.89}_{-0.88} \quad (-0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.2) \quad (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_{\text{drag}}$	$147.50^{+0.91}_{-0.91} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18557.9 \quad (\nu: 17.6) \quad (+1266.4\sigma)$
$H_0$	$67.7^{+1.7}_{-1.7} \quad (+0.1\sigma)$	$k_{\text{D}}$	$0.14037^{+0.00098}_{-0.0010} \quad (-0.0\sigma)$		
$\Omega_\Lambda$	$0.690^{+0.023}_{-0.025} \quad (+0.1\sigma)$	$100\theta_{\text{D}}$	$0.16093^{+0.00052}_{-0.00050} \quad (-0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 19273.13; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.80; R - 1 = 0.00714$$

## 20.14 base\_r\_CamSpecHM\_TT\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02228^{+0.00043}_{-0.00043} \quad (+0.0\sigma)$	$\Omega_m$	$0.309^{+0.026}_{-0.023} \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3370^{+95}_{-89} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1188^{+0.0042}_{-0.0039} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1417^{+0.0040}_{-0.0037} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.819^{+0.017}_{-0.018} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04102^{+0.00091}_{-0.00092} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.09599^{+0.00090}_{-0.00088} \quad (+0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0718^{+0.0014}_{-0.0014} \quad (+0.1\sigma)$
$\tau$	$0.080^{+0.038}_{-0.036} \quad (+0.0\sigma)$	$\sigma_8$	$0.827^{+0.029}_{-0.028} \quad (-0.0\sigma)$	$H(0.57)$	$93.06^{+0.78}_{-0.77} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.088^{+0.072}_{-0.071} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.026}_{-0.025} \quad (-0.1\sigma)$	$D_A(0.57)$	$1386^{+24}_{-23} \quad (-0.1\sigma)$
$n_s$	$0.970^{+0.012}_{-0.012} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.617^{+0.026}_{-0.025} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6753^{+0.0064}_{-0.0060} \quad (-0.1\sigma)$
$r$	$< 0.112 \quad (-0.0\sigma)$	$\sigma_8/h^{0.5}$	$1.005^{+0.039}_{-0.038} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.480^{+0.019}_{-0.018} \quad (-0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0048} \quad (-0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.477^{+0.091}_{-0.088} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.616^{+0.022}_{-0.021} \quad (+0.0\sigma)$
$A_{100}^{\text{PS}}$	$244^{+40}_{-50} \quad (-0.4\sigma)$	$z_{\text{re}}$	$10.0^{+3.2}_{-3.5} \quad (+0.0\sigma)$	$r_{0.002}$	$< 0.107 \quad (+0.0\sigma)$
$A_{143}^{\text{PS}}$	$38^{+20}_{-20} \quad (-0.6\sigma)$	$10^9 A_s$	$2.20^{+0.16}_{-0.15} \quad (-0.0\sigma)$	$r_{0.01}$	$< 0.109 \quad (-0.0\sigma)$
$A_{217}^{\text{PS}}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.027}_{-0.026} \quad (-0.4\sigma)$	$\ln(10^{10} A_t)$	$-0.6^{+2.1}_{-2.5} \quad (-0.0\sigma)$
$A_{217}^{\text{CIB}}$	$45^{+10}_{-10} \quad (-2.7\sigma)$	$D_{40}$	$1238^{+36}_{-35} \quad (-0.5\sigma)$	$r_{10}$	$< 0.0541 \quad (+0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.70 \quad (-1.0\sigma)$	$D_{220}$	$5695^{+82}_{-79} \quad (-0.5\sigma)$	$10^9 A_t$	$< 0.245 \quad (-0.0\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.21}$	$D_{810}$	$2530^{+27}_{-27} \quad (-0.3\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.210 \quad (-0.0\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{1420}$	$815^{+10}_{-9.9} \quad (-0.0\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24626^{+0.00018}_{-0.00019} \quad (-3.9\sigma)$
$A^{\text{kSZ}}$	—	$n_{\text{s},0.002}$	$0.970^{+0.012}_{-0.012} \quad (+0.4\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-6} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.37}_{-0.38}$	$Y_{\text{P}}$	$0.24494^{+0.00019}_{-0.00018} \quad (-4.0\sigma)$	$f_{2000}^{217}$	$106.1^{+4.0}_{-4.0} \quad (+0.2\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.36}$	$\text{Age}/\text{Gyr}$	$13.798^{+0.072}_{-0.072} \quad (-0.1\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.22}$	$z_*$	$1089.90^{+0.81}_{-0.76} \quad (-0.1\sigma)$	$\chi_{\text{lowTEB}}^2$	$10497.8 \quad (\nu: 3.6) \quad (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$r_*$	$144.82^{+0.92}_{-0.94} \quad (+0.1\sigma)$	$\chi_{\text{CamSpec}}^2$	$8060.1 \quad (\nu: 17.8)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$100\theta_*$	$1.04122^{+0.00090}_{-0.00090} \quad (+0.1\sigma)$	$\chi_{\text{H070p6}}^2$	$0.80 \quad (\nu: 0.1) \quad (-0.1\sigma)$
$c_{217}$	$0.9972^{+0.0034}_{-0.0034} \quad (+0.9\sigma)$	$z_{\text{drag}}$	$1059.63^{+0.91}_{-0.88} \quad (-0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.2) \quad (+0.3\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_{\text{drag}}$	$147.52^{+0.93}_{-0.93} \quad (+0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18558.0 \quad (\nu: 17.9) \quad (+1255.8\sigma)$
$H_0$	$67.8^{+1.8}_{-1.8} \quad (+0.1\sigma)$	$k_{\text{D}}$	$0.14036^{+0.00099}_{-0.0010} \quad (-0.0\sigma)$		
$\Omega_{\Lambda}$	$0.691^{+0.023}_{-0.026} \quad (+0.1\sigma)$	$100\theta_{\text{D}}$	$0.16092^{+0.00051}_{-0.00050} \quad (-0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18567.21; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.79; R - 1 = 0.00698$$

20.15 base\_r\_CamSpecHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02225^{+0.00044}_{-0.00045} (+0.0\sigma)$	$\Omega_\Lambda$	$0.688^{+0.024}_{-0.027} (+0.1\sigma)$	$k_D$	$0.1404^{+0.0010}_{-0.0010} (-0.0\sigma)$
$\Omega_c h^2$	$0.1192^{+0.0043}_{-0.0041} (-0.1\sigma)$	$\Omega_m$	$0.312^{+0.027}_{-0.024} (-0.1\sigma)$	$100\theta_D$	$0.16094^{+0.00052}_{-0.00051} (-0.1\sigma)$
$100\theta_{MC}$	$1.04095^{+0.00092}_{-0.00092} (+0.1\sigma)$	$\Omega_m h^2$	$0.1421^{+0.0040}_{-0.0039} (-0.1\sigma)$	$z_{eq}$	$3380^{+96}_{-92} (-0.1\sigma)$
$\tau$	$0.079^{+0.033}_{-0.034} (+0.0\sigma)$	$\Omega_m h^3$	$0.09598^{+0.00090}_{-0.00088} (+0.0\sigma)$	$100\theta_{eq}$	$0.817^{+0.018}_{-0.018} (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.088^{+0.066}_{-0.065} (-0.0\sigma)$	$\sigma_8$	$0.828^{+0.028}_{-0.025} (-0.0\sigma)$	$r_{drag}/D_V(0.57)$	$0.0716^{+0.0014}_{-0.0014} (+0.1\sigma)$
$n_s$	$0.969^{+0.012}_{-0.012} (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.462^{+0.027}_{-0.025} (-0.1\sigma)$	$H(0.57)$	$92.98^{+0.81}_{-0.79} (+0.1\sigma)$
$r$	$< 0.111 (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.619^{+0.026}_{-0.025} (-0.1\sigma)$	$D_A(0.57)$	$1388^{+25}_{-24} (-0.1\sigma)$
$y_{cal}$	$1.0003^{+0.0049}_{-0.0048} (-0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.008^{+0.039}_{-0.037} (-0.1\sigma)$	$F_{AP}(0.57)$	$0.6760^{+0.0066}_{-0.0063} (-0.1\sigma)$
$A_{100}^{PS}$	$244^{+40}_{-50} (-0.4\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.483^{+0.089}_{-0.086} (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.482^{+0.019}_{-0.018} (-0.1\sigma)$
$A_{143}^{PS}$	$39^{+20}_{-20} (-0.6\sigma)$	$z_{re}$	$9.99^{+2.9}_{-3.2} (+0.0\sigma)$	$\sigma_8(0.57)$	$0.616^{+0.021}_{-0.020} (+0.0\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} (+0.1\sigma)$	$10^9 A_s$	$2.19^{+0.15}_{-0.14} (-0.0\sigma)$	$r_{0.002}$	$< 0.105 (-0.0\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.028}_{-0.026} (-0.4\sigma)$	$r_{0.01}$	$< 0.108 (-0.0\sigma)$
$A_{143}^{tSZ}$	$< 6.68 (-1.0\sigma)$	$D_{40}$	$1240^{+36}_{-35} (-0.5\sigma)$	$\ln(10^{10} A_t)$	$-0.7^{+2.1}_{-2.5} (-0.0\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.21}$	$D_{220}$	$5692^{+82}_{-80} (-0.5\sigma)$	$r_{10}$	$< 0.0530 (-0.0\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{810}$	$2530^{+27}_{-27} (-0.3\sigma)$	$10^9 A_t$	$< 0.241 (-0.0\sigma)$
$A^{kSZ}$	—	$D_{1420}$	$815^{+10}_{-9.8} (-0.0\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.207 (-0.0\sigma)$
$A_{100}^{dust}$	$0.98^{+0.38}_{-0.38}$	$n_{s,0.002}$	$0.969^{+0.012}_{-0.012} (+0.4\sigma)$	$Y_P^{BBN}$	$0.24625^{+0.00020}_{-0.00019} (-3.9\sigma)$
$A_{143}^{dust}$	$1.02^{+0.35}_{-0.36}$	$Y_P$	$0.24492^{+0.00019}_{-0.00019} (-3.9\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-6} (-0.4\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.22}$	$Age/Gyr$	$13.805^{+0.075}_{-0.075} (-0.1\sigma)$	$f_{2000}^{217}$	$106.2^{+4.0}_{-4.0} (+0.2\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$z_*$	$1089.99^{+0.84}_{-0.79} (-0.1\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} (-0.4\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} (-1.4\sigma)$	$r_*$	$144.73^{+0.95}_{-0.95} (+0.1\sigma)$	$\chi_{lowTEB}^2$	$10497.9 (\nu: 3.5) (-0.3\sigma)$
$c_{217}$	$0.9972^{+0.0034}_{-0.0034} (+0.9\sigma)$	$100\theta_*$	$1.04116^{+0.00090}_{-0.00090} (+0.1\sigma)$	$\chi_{CamSpec}^2$	$8059.9 (\nu: 17.2)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$z_{drag}$	$1059.59^{+0.92}_{-0.86} (-0.0\sigma)$	$\chi_{prior}^2$	$8.4 (\nu: 6.2) (+0.3\sigma)$
$H_0$	$67.6^{+1.8}_{-1.9} (+0.1\sigma)$	$r_{drag}$	$147.44^{+0.95}_{-0.94} (+0.1\sigma)$	$\chi_{CMB}^2$	$18557.8 (\nu: 17.5) (+1270.0\sigma)$

$$\bar{\chi}_{eff}^2 = 18566.26; \Delta\bar{\chi}_{eff}^2 = 7282.87; R - 1 = 0.00770$$

## 20.16 base\_r\_CamSpecHM\_TTTEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022352	$0.02237^{+0.00032}_{-0.00032}$ (+0.7 $\sigma$ )	$H_0$	67.60	$67.7^{+1.3}_{-1.3}$ (+0.7 $\sigma$ )	$k_D$	0.14062	$0.14056^{+0.00068}_{-0.00068}$ (+0.0 $\sigma$ )
$\Omega_c h^2$	0.11917	$0.1189^{+0.0029}_{-0.0028}$ (-0.6 $\sigma$ )	$\Omega_\Lambda$	0.6889	$0.691^{+0.016}_{-0.018}$ (+0.6 $\sigma$ )	$100\theta_D$	0.160777	$0.16078^{+0.00037}_{-0.00037}$ (-0.8 $\sigma$ )
$100\theta_{MC}$	1.04083	$1.04086^{+0.00060}_{-0.00060}$ (+0.3 $\sigma$ )	$\Omega_m$	0.3111	$0.309^{+0.018}_{-0.016}$ (-0.6 $\sigma$ )	$z_{eq}$	3382	$3375^{+65}_{-62}$ (-0.5 $\sigma$ )
$\tau$	0.0765	$0.076^{+0.033}_{-0.033}$ (-0.1 $\sigma$ )	$\Omega_m h^2$	0.14216	$0.1419^{+0.0027}_{-0.0026}$ (-0.5 $\sigma$ )	$100\theta_{eq}$	0.8168	$0.818^{+0.012}_{-0.012}$ (+0.6 $\sigma$ )
$\ln(10^{10} A_s)$	3.083	$3.083^{+0.063}_{-0.065}$ (-0.3 $\sigma$ )	$\Omega_m h^3$	0.09610	$0.09609^{+0.00060}_{-0.00059}$ (+0.4 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07158	$0.07169^{+0.00095}_{-0.00096}$ (+0.6 $\sigma$ )
$n_s$	0.9674	$0.9694^{+0.0093}_{-0.0094}$ (+0.9 $\sigma$ )	$\sigma_8$	0.8250	$0.824^{+0.026}_{-0.026}$ (-0.4 $\sigma$ )	$H(0.57)$	93.02	$93.07^{+0.55}_{-0.54}$ (+0.7 $\sigma$ )
$r$	0.000	< 0.146 (+0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4601	$0.459^{+0.019}_{-0.019}$ (-0.7 $\sigma$ )	$D_A(0.57)$	1387.6	$1386^{+17}_{-17}$ (-0.7 $\sigma$ )
$y_{cal}$	0.99998	$1.0004^{+0.0048}_{-0.0048}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6161	$0.615^{+0.021}_{-0.021}$ (-0.6 $\sigma$ )	$F_{AP}(0.57)$	0.67593	$0.6755^{+0.0045}_{-0.0042}$ (-0.6 $\sigma$ )
$A_{100}^{PS}$	246.7	$242^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0034	$1.002^{+0.032}_{-0.032}$ (-0.6 $\sigma$ )	$f\sigma_8(0.57)$	0.4796	$0.479^{+0.015}_{-0.015}$ (-0.6 $\sigma$ )
$A_{143}^{PS}$	34.7	$38^{+10}_{-10}$ (-0.7 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.480	$2.472^{+0.076}_{-0.077}$ (-0.7 $\sigma$ )	$\sigma_8(0.57)$	0.6138	$0.614^{+0.020}_{-0.019}$ (-0.3 $\sigma$ )
$A_{217}^{PS}$	97.6	$99^{+30}_{-30}$ (+0.1 $\sigma$ )	$z_{re}$	9.80	$9.7^{+3.0}_{-3.1}$ (-0.2 $\sigma$ )	$r_{0.002}$	0.000	< 0.142 (+0.7 $\sigma$ )
$A_{217}^{CIB}$	46.4	$45^{+10}_{-10}$ (-2.8 $\sigma$ )	$10^9 A_s$	2.182	$2.18^{+0.14}_{-0.14}$ (-0.3 $\sigma$ )	$r_{0.01}$	0.000	< 0.144 (+0.6 $\sigma$ )
$A_{143}^{tSZ}$	3.40	< 6.91 (-1.0 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.8727	$1.873^{+0.023}_{-0.022}$ (-0.7 $\sigma$ )	$\ln(10^{10} A_t)$	-5.83	$-0.2^{+1.9}_{-2.3}$ (+0.4 $\sigma$ )
$r_{143 \times 217}^{PS}$	0.418	$0.52^{+0.23}_{-0.21}$	$D_{40}$	1228.7	$1246^{+37}_{-35}$ (-0.4 $\sigma$ )	$r_{10}$	0.0001	< 0.0721 (+0.7 $\sigma$ )
$\xi^{tSZ \times CIB}$	0.01	—	$D_{220}$	5709	$5707^{+77}_{-75}$ (-0.5 $\sigma$ )	$10^9 A_t$	0.000	< 0.320 (+0.6 $\sigma$ )
$A^{kSZ}$	4.8	—	$D_{810}$	2528.2	$2531^{+26}_{-25}$ (-0.3 $\sigma$ )	$10^9 A_t e^{-2\tau}$	0.000	< 0.274 (+0.6 $\sigma$ )
$A_{100}^{dust}$	0.9995	$0.98^{+0.38}_{-0.37}$	$D_{1420}$	814.0	$815.5^{+9.2}_{-9.2}$ (+0.1 $\sigma$ )	$Y_P^{BBN}$	0.246295	$0.24630^{+0.00013}_{-0.00014}$ (-5.1 $\sigma$ )
$A_{143}^{dust}$	1.031	$1.02^{+0.35}_{-0.35}$	$n_{s,0.002}$	0.9674	$0.9694^{+0.0093}_{-0.0094}$ (+0.9 $\sigma$ )	$f_{2000}^{143}$	28.7	$28^{+5}_{-5}$ (-0.5 $\sigma$ )
$A_{217}^{dust}$	1.223	$1.22^{+0.23}_{-0.23}$	$Y_P$	0.244964	$0.24497^{+0.00014}_{-0.00013}$ (-5.1 $\sigma$ )	$f_{2000}^{217}$	106.23	$105.8^{+3.7}_{-3.6}$ (+0.0 $\sigma$ )
$A_{143 \times 217}^{dust}$	0.955	$0.98^{+0.35}_{-0.35}$	Age/Gyr	13.799	$13.795^{+0.050}_{-0.050}$ (-0.7 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.26	$31^{+4}_{-4}$ (-0.6 $\sigma$ )
$c_{100}$	0.99667	$0.9968^{+0.0019}_{-0.0019}$ (-1.8 $\sigma$ )	$z_*$	1089.85	$1089.81^{+0.58}_{-0.56}$ (-0.8 $\sigma$ )	$\chi_{lowTEB}^2$	10495.7	$10498.4 (\nu: 3.5)$ (-0.3 $\sigma$ )
$c_{217}$	0.99717	$0.9970^{+0.0034}_{-0.0034}$ (+0.7 $\sigma$ )	$r_*$	144.66	$144.73^{+0.63}_{-0.64}$ (+0.4 $\sigma$ )	$\chi_{CamSpec}^2$	12936.0	$12951.5 (\nu: 18.2)$
$c_{TE}$	1.0042	$1.0045^{+0.0087}_{-0.0086}$	$100\theta_*$	1.04102	$1.04105^{+0.00058}_{-0.00059}$ (+0.3 $\sigma$ )	$\chi_{prior}^2$	3.7	$9.0 (\nu: 6.3)$ (-1.8 $\sigma$ )
$c_{EE}$	1.0009	$1.0011^{+0.0083}_{-0.0082}$	$z_{drag}$	1059.82	$1059.83^{+0.64}_{-0.61}$ (+0.6 $\sigma$ )	$\chi_{CMB}^2$	23431.8	$23449.8 (\nu: 18.6)$ (+1531.6 $\sigma$ )
$\beta_1^1$	-0.07	$-0.1^{+1.9}_{-2.0}$	$r_{drag}$	147.33	$147.40^{+0.63}_{-0.63}$ (+0.3 $\sigma$ )			

Best-fit  $\chi_{eff}^2 = 23435.48$ ;  $\Delta\chi_{eff}^2 = 10499.90$ ;  $\bar{\chi}_{eff}^2 = 23458.82$ ;  $\Delta\bar{\chi}_{eff}^2 = 10489.83$ ;  $R - 1 = 0.01281$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.74 ( $\Delta$  -1.47) CamSpec like\_v9.10CMH\_unified: 12936.01



## 20.17 base\_r\_CamSpecHM\_TTTEE\_lowTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00029}_{-0.00028} \quad (+0.6\sigma)$	$\Omega_m$	$0.309^{+0.013}_{-0.012} \quad (-0.5\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07173^{+0.00072}_{-0.00070} \quad (+0.4\sigma)$
$\Omega_c h^2$	$0.1187^{+0.0021}_{-0.0021} \quad (-0.4\sigma)$	$\Omega_m h^2$	$0.1418^{+0.0020}_{-0.0020} \quad (-0.4\sigma)$	$H(0.57)$	$93.09^{+0.43}_{-0.42} \quad (+0.6\sigma)$
$100\theta_{\text{MC}}$	$1.04087^{+0.00056}_{-0.00056} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.09609^{+0.00061}_{-0.00059} \quad (+0.3\sigma)$	$D_A(0.57)$	$1385^{+13}_{-12} \quad (-0.5\sigma)$
$\tau$	$0.077^{+0.031}_{-0.032} \quad (-0.2\sigma)$	$\sigma_8$	$0.825^{+0.026}_{-0.026} \quad (-0.4\sigma)$	$F_{\text{AP}}(0.57)$	$0.6753^{+0.0032}_{-0.0032} \quad (-0.5\sigma)$
$\ln(10^{10} A_s)$	$3.084^{+0.061}_{-0.064} \quad (-0.4\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.458^{+0.017}_{-0.017} \quad (-0.6\sigma)$	$f\sigma_8(0.57)$	$0.479^{+0.015}_{-0.015} \quad (-0.5\sigma)$
$n_s$	$0.9697^{+0.0082}_{-0.0081} \quad (+0.8\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.614^{+0.020}_{-0.020} \quad (-0.6\sigma)$	$\sigma_8(0.57)$	$0.614^{+0.019}_{-0.019} \quad (-0.3\sigma)$
$r$	$< 0.146 \quad (+0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.001^{+0.031}_{-0.031} \quad (-0.5\sigma)$	$r_{0.002}$	$< 0.142 \quad (+0.6\sigma)$
$y_{\text{cal}}$	$1.0004^{+0.0048}_{-0.0048} \quad (-0.0\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.471^{+0.074}_{-0.076} \quad (-0.7\sigma)$	$r_{0.01}$	$< 0.144 \quad (+0.6\sigma)$
$A_{100}^{\text{PS}}$	$242^{+40}_{-40} \quad (-0.6\sigma)$	$z_{\text{re}}$	$9.8^{+2.9}_{-3.0} \quad (-0.3\sigma)$	$\ln(10^{10} A_t)$	$-0.2^{+1.8}_{-2.3} \quad (+0.4\sigma)$
$A_{143}^{\text{PS}}$	$38^{+10}_{-10} \quad (-0.7\sigma)$	$10^9 A_s$	$2.18^{+0.14}_{-0.14} \quad (-0.4\sigma)$	$r_{10}$	$< 0.0721 \quad (+0.6\sigma)$
$A_{217}^{\text{PS}}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.021}_{-0.021} \quad (-0.6\sigma)$	$10^9 A_t$	$< 0.319 \quad (+0.6\sigma)$
$A_{217}^{\text{CIB}}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$D_{40}$	$1246^{+37}_{-35} \quad (-0.3\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.274 \quad (+0.6\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.92 \quad (-1.0\sigma)$	$D_{220}$	$5708^{+76}_{-74} \quad (-0.5\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24630^{+0.00012}_{-0.00012} \quad (-5.9\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.21}$	$D_{810}$	$2531^{+26}_{-25} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.5\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{1420}$	$815.6^{+9.1}_{-9.1} \quad (+0.1\sigma)$	$f_{2000}^{217}$	$105.8^{+3.7}_{-3.6} \quad (+0.1\sigma)$
$A^{\text{kSZ}}$	—	$n_{\text{s},0.002}$	$0.9697^{+0.0082}_{-0.0081} \quad (+0.8\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.5\sigma)$
$A_{100}^{\text{dust}}$	$0.98^{+0.38}_{-0.38}$	$Y_{\text{P}}$	$0.24497^{+0.00013}_{-0.00012} \quad (-5.9\sigma)$	$\chi_{\text{lowTEB}}^2$	$10498.3 \quad (\nu: 3.5) \quad (-0.3\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.35}_{-0.35}$	$\text{Age/Gyr}$	$13.793^{+0.041}_{-0.041} \quad (-0.6\sigma)$	$\chi_{\text{CamSpec}}^2$	$12951.0 \quad (\nu: 17.5)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.22}$	$z_*$	$1089.79^{+0.46}_{-0.45} \quad (-0.7\sigma)$	$\chi_{6\text{DF}}^2$	$0.041 \quad (\nu: 0.0) \quad (-0.3\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.34}$	$r_*$	$144.76^{+0.50}_{-0.49} \quad (+0.2\sigma)$	$\chi_{\text{MGS}}^2$	$1.43 \quad (\nu: 0.1) \quad (+0.5\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$100\theta_*$	$1.04107^{+0.00056}_{-0.00055} \quad (+0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.74 \quad (\nu: 0.1) \quad (-0.2\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0034} \quad (+0.7\sigma)$	$z_{\text{drag}}$	$1059.84^{+0.64}_{-0.59} \quad (+0.5\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.61 \quad (\nu: 0.1) \quad (-0.4\sigma)$
$c_{TE}$	$1.0045^{+0.0088}_{-0.0086}$	$r_{\text{drag}}$	$147.42^{+0.51}_{-0.51} \quad (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$9.0 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{EE}$	$1.0011^{+0.0083}_{-0.0083}$	$k_{\text{D}}$	$0.14054^{+0.00061}_{-0.00061} \quad (+0.2\sigma)$	$\chi_{\text{CMB}}^2$	$23449.4 \quad (\nu: 17.6) \quad (+1542.7\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_{\text{D}}$	$0.16077^{+0.00036}_{-0.00036} \quad (-0.7\sigma)$	$\chi_{\text{BAO}}^2$	$4.83 \quad (\nu: 0.2) \quad (-0.2\sigma)$
$H_0$	$67.79^{+0.94}_{-0.93} \quad (+0.5\sigma)$	$z_{\text{eq}}$	$3372^{+48}_{-47} \quad (-0.4\sigma)$		
$\Omega_{\Lambda}$	$0.691^{+0.012}_{-0.013} \quad (+0.5\sigma)$	$100\theta_{\text{eq}}$	$0.8187^{+0.0090}_{-0.0090} \quad (+0.4\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 23463.17; \Delta\bar{\chi}_{\text{eff}}^2 = 10489.50; R - 1 = 0.01444$$

## 20.18 base\_r\_CamSpecHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00031}_{-0.00031} \quad (+0.7\sigma)$	$H_0$	$67.8^{+1.2}_{-1.2} \quad (+0.6\sigma)$	$k_D$	$0.14054^{+0.00068}_{-0.00068} \quad (+0.0\sigma)$
$\Omega_c h^2$	$0.1187^{+0.0028}_{-0.0027} \quad (-0.6\sigma)$	$\Omega_\Lambda$	$0.691^{+0.016}_{-0.017} \quad (+0.6\sigma)$	$100\theta_D$	$0.16077^{+0.00037}_{-0.00037} \quad (-0.7\sigma)$
$100\theta_{MC}$	$1.04087^{+0.00059}_{-0.00059} \quad (+0.2\sigma)$	$\Omega_m$	$0.309^{+0.017}_{-0.016} \quad (-0.6\sigma)$	$z_{eq}$	$3372^{+63}_{-61} \quad (-0.5\sigma)$
$\tau$	$0.077^{+0.032}_{-0.033} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1417^{+0.0026}_{-0.0026} \quad (-0.5\sigma)$	$100\theta_{eq}$	$0.819^{+0.012}_{-0.012} \quad (+0.5\sigma)$
$\ln(10^{10} A_s)$	$3.084^{+0.063}_{-0.065} \quad (-0.3\sigma)$	$\Omega_m h^3$	$0.09609^{+0.00060}_{-0.00059} \quad (+0.4\sigma)$	$r_{drag}/D_V(0.57)$	$0.07174^{+0.00093}_{-0.00092} \quad (+0.6\sigma)$
$n_s$	$0.9698^{+0.0092}_{-0.0093} \quad (+0.9\sigma)$	$\sigma_8$	$0.824^{+0.026}_{-0.025} \quad (-0.4\sigma)$	$H(0.57)$	$93.10^{+0.54}_{-0.53} \quad (+0.7\sigma)$
$r$	$< 0.147 \quad (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.458^{+0.019}_{-0.018} \quad (-0.7\sigma)$	$D_A(0.57)$	$1385^{+16}_{-16} \quad (-0.6\sigma)$
$y_{cal}$	$1.0004^{+0.0048}_{-0.0048} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.614^{+0.020}_{-0.021} \quad (-0.6\sigma)$	$F_{AP}(0.57)$	$0.6753^{+0.0043}_{-0.0041} \quad (-0.6\sigma)$
$A_{100}^{PS}$	$242^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.001^{+0.032}_{-0.032} \quad (-0.6\sigma)$	$f\sigma_8(0.57)$	$0.479^{+0.015}_{-0.015} \quad (-0.6\sigma)$
$A_{143}^{PS}$	$38^{+10}_{-10} \quad (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.471^{+0.076}_{-0.077} \quad (-0.7\sigma)$	$\sigma_8(0.57)$	$0.614^{+0.020}_{-0.019} \quad (-0.3\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$z_{re}$	$9.8^{+3.0}_{-3.1} \quad (-0.2\sigma)$	$r_{0.002}$	$< 0.143 \quad (+0.7\sigma)$
$A_{217}^{CIB}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.19^{+0.14}_{-0.14} \quad (-0.3\sigma)$	$r_{0.01}$	$< 0.145 \quad (+0.6\sigma)$
$A_{143}^{tSZ}$	$< 6.89 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.023}_{-0.022} \quad (-0.7\sigma)$	$\ln(10^{10} A_t)$	$-0.2^{+1.8}_{-2.3} \quad (+0.4\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.21}$	$D_{40}$	$1246^{+37}_{-35} \quad (-0.4\sigma)$	$r_{10}$	$< 0.0726 \quad (+0.7\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{220}$	$5708^{+77}_{-74} \quad (-0.5\sigma)$	$10^9 A_t$	$< 0.322 \quad (+0.6\sigma)$
$A^{kSZ}$	—	$D_{810}$	$2531^{+26}_{-25} \quad (-0.3\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.275 \quad (+0.6\sigma)$
$A_{100}^{dust}$	$0.98^{+0.38}_{-0.38}$	$D_{1420}$	$815.6^{+9.2}_{-9.2} \quad (+0.1\sigma)$	$Y_P^{BBN}$	$0.24630^{+0.00013}_{-0.00014} \quad (-5.2\sigma)$
$A_{143}^{dust}$	$1.02^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.9698^{+0.0092}_{-0.0093} \quad (+0.9\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.5\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.22}$	$Y_P$	$0.24498^{+0.00014}_{-0.00013} \quad (-5.2\sigma)$	$f_{2000}^{217}$	$105.8^{+3.7}_{-3.7} \quad (+0.0\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.34}$	$Age/Gyr$	$13.793^{+0.049}_{-0.049} \quad (-0.7\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.79^{+0.56}_{-0.55} \quad (-0.8\sigma)$	$\chi_{lowTEB}^2$	$10498.4 \quad (\nu: 3.6) \quad (-0.3\sigma)$
$c_{217}$	$0.9970^{+0.0034}_{-0.0034} \quad (+0.7\sigma)$	$r_*$	$144.76^{+0.61}_{-0.63} \quad (+0.4\sigma)$	$\chi_{CamSpec}^2$	$12951.4 \quad (\nu: 18.1)$
$c_{TE}$	$1.0045^{+0.0089}_{-0.0087}$	$100\theta_*$	$1.04107^{+0.00058}_{-0.00058} \quad (+0.2\sigma)$	$\chi_{JLA}^2$	$706.73 \quad (\nu: 0.0) \quad (-0.5\sigma)$
$c_{EE}$	$1.0011^{+0.0083}_{-0.0083}$	$z_{drag}$	$1059.84^{+0.64}_{-0.62} \quad (+0.6\sigma)$	$\chi_{prior}^2$	$9.0 \quad (\nu: 6.3) \quad (-1.8\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_{drag}$	$147.43^{+0.62}_{-0.62} \quad (+0.3\sigma)$	$\chi_{CMB}^2$	$23449.8 \quad (\nu: 18.3) \quad (+1530.5\sigma)$

$$\bar{\chi}_{eff}^2 = 24165.50; \Delta\chi_{eff}^2 = 10489.67; R - 1 = 0.01216$$

## 20.19 base\_r\_CamSpecHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00032}_{-0.00031} \quad (+0.7\sigma)$	$H_0$	$67.8^{+1.2}_{-1.2} \quad (+0.6\sigma)$	$k_D$	$0.14053^{+0.00068}_{-0.00069} \quad (+0.0\sigma)$
$\Omega_c h^2$	$0.1187^{+0.0028}_{-0.0027} \quad (-0.6\sigma)$	$\Omega_\Lambda$	$0.692^{+0.016}_{-0.017} \quad (+0.6\sigma)$	$100\theta_D$	$0.16076^{+0.00037}_{-0.00037} \quad (-0.8\sigma)$
$100\theta_{MC}$	$1.04088^{+0.00059}_{-0.00060} \quad (+0.2\sigma)$	$\Omega_m$	$0.308^{+0.017}_{-0.016} \quad (-0.6\sigma)$	$z_{eq}$	$3370^{+64}_{-62} \quad (-0.5\sigma)$
$\tau$	$0.077^{+0.032}_{-0.033} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1417^{+0.0027}_{-0.0026} \quad (-0.5\sigma)$	$100\theta_{eq}$	$0.819^{+0.012}_{-0.012} \quad (+0.6\sigma)$
$\ln(10^{10} A_s)$	$3.084^{+0.063}_{-0.065} \quad (-0.3\sigma)$	$\Omega_m h^3$	$0.09610^{+0.00060}_{-0.00059} \quad (+0.3\sigma)$	$r_{drag}/D_V(0.57)$	$0.07176^{+0.00094}_{-0.00094} \quad (+0.6\sigma)$
$n_s$	$0.9700^{+0.0093}_{-0.0094} \quad (+0.9\sigma)$	$\sigma_8$	$0.824^{+0.026}_{-0.025} \quad (-0.4\sigma)$	$H(0.57)$	$93.11^{+0.55}_{-0.53} \quad (+0.7\sigma)$
$r$	$< 0.148 \quad (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.458^{+0.019}_{-0.019} \quad (-0.7\sigma)$	$D_A(0.57)$	$1385^{+17}_{-16} \quad (-0.7\sigma)$
$y_{cal}$	$1.0004^{+0.0048}_{-0.0048} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.614^{+0.020}_{-0.021} \quad (-0.6\sigma)$	$F_{AP}(0.57)$	$0.6751^{+0.0044}_{-0.0041} \quad (-0.6\sigma)$
$A_{100}^{PS}$	$242^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.001^{+0.032}_{-0.032} \quad (-0.6\sigma)$	$f\sigma_8(0.57)$	$0.478^{+0.015}_{-0.015} \quad (-0.6\sigma)$
$A_{143}^{PS}$	$38^{+10}_{-10} \quad (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.471^{+0.076}_{-0.077} \quad (-0.7\sigma)$	$\sigma_8(0.57)$	$0.614^{+0.020}_{-0.020} \quad (-0.3\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$z_{re}$	$9.8^{+3.0}_{-3.1} \quad (-0.2\sigma)$	$r_{0.002}$	$< 0.144 \quad (+0.7\sigma)$
$A_{217}^{CIB}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.19^{+0.14}_{-0.14} \quad (-0.3\sigma)$	$r_{0.01}$	$< 0.146 \quad (+0.7\sigma)$
$A_{143}^{tSZ}$	$< 6.90 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.023}_{-0.022} \quad (-0.7\sigma)$	$\ln(10^{10} A_t)$	$-0.1^{+1.8}_{-2.3} \quad (+0.4\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.21}$	$D_{40}$	$1245^{+37}_{-35} \quad (-0.4\sigma)$	$r_{10}$	$< 0.0731 \quad (+0.7\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{220}$	$5708^{+77}_{-74} \quad (-0.5\sigma)$	$10^9 A_t$	$< 0.322 \quad (+0.6\sigma)$
$A^{kSZ}$	—	$D_{810}$	$2531^{+26}_{-25} \quad (-0.3\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.276 \quad (+0.6\sigma)$
$A_{100}^{dust}$	$0.98^{+0.38}_{-0.38}$	$D_{1420}$	$815.7^{+9.1}_{-9.1} \quad (+0.1\sigma)$	$Y_P^{BBN}$	$0.24631^{+0.00013}_{-0.00014} \quad (-5.2\sigma)$
$A_{143}^{dust}$	$1.02^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.9700^{+0.0093}_{-0.0094} \quad (+0.9\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.5\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.22}$	$Y_P$	$0.24498^{+0.00014}_{-0.00013} \quad (-5.2\sigma)$	$f_{2000}^{217}$	$105.8^{+3.7}_{-3.7} \quad (+0.0\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.34}$	$Age/Gyr$	$13.791^{+0.049}_{-0.050} \quad (-0.7\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.77^{+0.57}_{-0.56} \quad (-0.8\sigma)$	$\chi_{lowTEB}^2$	$10498.4 \quad (\nu: 3.6) \quad (-0.3\sigma)$
$c_{217}$	$0.9970^{+0.0034}_{-0.0034} \quad (+0.7\sigma)$	$r_*$	$144.77^{+0.62}_{-0.64} \quad (+0.4\sigma)$	$\chi_{CamSpec}^2$	$12951.5 \quad (\nu: 18.2)$
$c_{TE}$	$1.0045^{+0.0089}_{-0.0087}$	$100\theta_*$	$1.04108^{+0.00058}_{-0.00058} \quad (+0.3\sigma)$	$\chi_{H070p6}^2$	$0.73 \quad (\nu: 0.1) \quad (-0.6\sigma)$
$c_{EE}$	$1.0011^{+0.0083}_{-0.0083}$	$z_{drag}$	$1059.86^{+0.65}_{-0.63} \quad (+0.6\sigma)$	$\chi_{prior}^2$	$9.0 \quad (\nu: 6.3) \quad (-1.8\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_{drag}$	$147.44^{+0.62}_{-0.63} \quad (+0.3\sigma)$	$\chi_{CMB}^2$	$23449.9 \quad (\nu: 18.4) \quad (+1528.7\sigma)$

$$\bar{\chi}_{eff}^2 = 23459.56; \Delta\bar{\chi}_{eff}^2 = 10489.63; R - 1 = 0.01238$$

## 20.20 base\_r\_CamSpecHM\_TTTEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00032}_{-0.00031} \quad (+0.7\sigma)$	$H_0$	$67.7^{+1.2}_{-1.3} \quad (+0.7\sigma)$	$k_D$	$0.14055^{+0.00068}_{-0.00069} \quad (+0.0\sigma)$
$\Omega_c h^2$	$0.1188^{+0.0028}_{-0.0028} \quad (-0.6\sigma)$	$\Omega_\Lambda$	$0.691^{+0.016}_{-0.017} \quad (+0.6\sigma)$	$100\theta_D$	$0.16077^{+0.00037}_{-0.00037} \quad (-0.8\sigma)$
$100\theta_{MC}$	$1.04086^{+0.00060}_{-0.00060} \quad (+0.3\sigma)$	$\Omega_m$	$0.309^{+0.017}_{-0.016} \quad (-0.6\sigma)$	$z_{eq}$	$3375^{+64}_{-63} \quad (-0.5\sigma)$
$\tau$	$0.077^{+0.030}_{-0.031} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1419^{+0.0027}_{-0.0026} \quad (-0.5\sigma)$	$100\theta_{eq}$	$0.818^{+0.012}_{-0.012} \quad (+0.6\sigma)$
$\ln(10^{10} A_s)$	$3.085^{+0.060}_{-0.060} \quad (-0.3\sigma)$	$\Omega_m h^3$	$0.09609^{+0.00060}_{-0.00059} \quad (+0.4\sigma)$	$r_{drag}/D_V(0.57)$	$0.07170^{+0.00095}_{-0.00094} \quad (+0.6\sigma)$
$n_s$	$0.9695^{+0.0094}_{-0.0093} \quad (+0.9\sigma)$	$\sigma_8$	$0.825^{+0.024}_{-0.025} \quad (-0.4\sigma)$	$H(0.57)$	$93.07^{+0.55}_{-0.54} \quad (+0.7\sigma)$
$r$	$< 0.146 \quad (+0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.019}_{-0.018} \quad (-0.7\sigma)$	$D_A(0.57)$	$1386^{+17}_{-17} \quad (-0.7\sigma)$
$y_{cal}$	$1.0004^{+0.0048}_{-0.0048} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.615^{+0.020}_{-0.020} \quad (-0.6\sigma)$	$F_{AP}(0.57)$	$0.6754^{+0.0043}_{-0.0042} \quad (-0.6\sigma)$
$A_{100}^{PS}$	$242^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.003^{+0.031}_{-0.032} \quad (-0.6\sigma)$	$f\sigma_8(0.57)$	$0.479^{+0.015}_{-0.015} \quad (-0.6\sigma)$
$A_{143}^{PS}$	$38^{+10}_{-10} \quad (-0.7\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.474^{+0.074}_{-0.077} \quad (-0.8\sigma)$	$\sigma_8(0.57)$	$0.614^{+0.018}_{-0.018} \quad (-0.3\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$z_{re}$	$9.8^{+2.7}_{-2.7} \quad (-0.2\sigma)$	$r_{0.002}$	$< 0.142 \quad (+0.7\sigma)$
$A_{217}^{CIB}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$10^9 A_s$	$2.19^{+0.13}_{-0.13} \quad (-0.3\sigma)$	$r_{0.01}$	$< 0.144 \quad (+0.6\sigma)$
$A_{143}^{tSZ}$	$< 6.89 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.873^{+0.023}_{-0.022} \quad (-0.7\sigma)$	$\ln(10^{10} A_t)$	$-0.2^{+1.8}_{-2.3} \quad (+0.4\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.21}$	$D_{40}$	$1246^{+37}_{-35} \quad (-0.4\sigma)$	$r_{10}$	$< 0.0720 \quad (+0.7\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{220}$	$5707^{+77}_{-74} \quad (-0.5\sigma)$	$10^9 A_t$	$< 0.320 \quad (+0.6\sigma)$
$A^{kSZ}$	—	$D_{810}$	$2531^{+26}_{-25} \quad (-0.4\sigma)$	$10^9 A_t e^{-2\tau}$	$< 0.274 \quad (+0.6\sigma)$
$A_{100}^{dust}$	$0.98^{+0.38}_{-0.37}$	$D_{1420}$	$815.5^{+9.2}_{-9.2} \quad (+0.1\sigma)$	$Y_P^{BBN}$	$0.24630^{+0.00013}_{-0.00014} \quad (-5.1\sigma)$
$A_{143}^{dust}$	$1.02^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.9695^{+0.0094}_{-0.0093} \quad (+0.9\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.5\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.22}$	$Y_P$	$0.24497^{+0.00014}_{-0.00013} \quad (-5.1\sigma)$	$f_{2000}^{217}$	$105.8^{+3.8}_{-3.7} \quad (+0.0\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.34}$	$Age/Gyr$	$13.794^{+0.049}_{-0.050} \quad (-0.7\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$z_*$	$1089.81^{+0.56}_{-0.56} \quad (-0.8\sigma)$	$\chi_{lowTEB}^2$	$10498.4 \quad (\nu: 3.6) \quad (-0.3\sigma)$
$c_{217}$	$0.9970^{+0.0034}_{-0.0034} \quad (+0.7\sigma)$	$r_*$	$144.73^{+0.63}_{-0.63} \quad (+0.4\sigma)$	$\chi_{CamSpec}^2$	$12951.3 \quad (\nu: 17.9)$
$c_{TE}$	$1.0045^{+0.0089}_{-0.0086}$	$100\theta_*$	$1.04105^{+0.00059}_{-0.00059} \quad (+0.3\sigma)$	$\chi_{prior}^2$	$9.0 \quad (\nu: 6.3) \quad (-1.8\sigma)$
$c_{EE}$	$1.0010^{+0.0083}_{-0.0083}$	$z_{drag}$	$1059.84^{+0.64}_{-0.61} \quad (+0.6\sigma)$	$\chi_{CMB}^2$	$23449.7 \quad (\nu: 18.2) \quad (+1538.2\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$r_{drag}$	$147.40^{+0.63}_{-0.63} \quad (+0.3\sigma)$		

$$\bar{\chi}_{eff}^2 = 23458.69; \Delta\bar{\chi}_{eff}^2 = 10489.81; R - 1 = 0.01198$$

## 20.21 base\_r\_plikHM\_TE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022403	$0.02241^{+0.00049}_{-0.00048}$	$\sigma_8 \Omega_m^{0.25}$	0.5998	$0.598^{+0.034}_{-0.033}$	$k_D$	0.14029	$0.1403^{+0.0011}_{-0.0011}$
$\Omega_c h^2$	0.11771	$0.1176^{+0.0039}_{-0.0039}$	$\sigma_8/h^{0.5}$	0.979	$0.977^{+0.052}_{-0.050}$	$100\theta_D$	0.16080	$0.16081^{+0.00063}_{-0.00061}$
$100\theta_{MC}$	1.04101	$1.0410^{+0.0010}_{-0.0010}$	$\langle d^2 \rangle^{1/2}$	2.407	$2.40^{+0.11}_{-0.11}$	$z_{eq}$	3348	$3346^{+91}_{-88}$
$\tau$	0.0625	$0.061^{+0.041}_{-0.041}$	$z_{re}$	8.45	$8.1^{+4.1}_{-4.4}$	$k_{eq}$	0.010220	$0.01021^{+0.00028}_{-0.00027}$
$\ln(10^{10} A_s)$	3.050	$3.046^{+0.089}_{-0.087}$	$10^9 A_s$	2.111	$2.10^{+0.19}_{-0.19}$	$100\theta_{eq}$	0.8232	$0.824^{+0.017}_{-0.017}$
$n_s$	0.9756	$0.977^{+0.021}_{-0.020}$	$10^9 A_s e^{-2\tau}$	1.8628	$1.863^{+0.037}_{-0.037}$	$100\theta_{s,eq}$	0.4545	$0.4548^{+0.0089}_{-0.0088}$
$r$	0.001	$< 0.147$	$D_{40}$	1201	$1217^{+52}_{-49}$	$r_{drag}/D_V(0.57)$	0.07208	$0.0721^{+0.0014}_{-0.0013}$
$y_{cal}$	0.99998	$1.0001^{+0.0049}_{-0.0049}$	$D_{220}$	5673	$5670^{+110}_{-110}$	$H(0.57)$	93.25	$93.29^{+0.81}_{-0.77}$
$A_{100}^{dustTE}$	0.137	$0.138^{+0.074}_{-0.074}$	$D_{810}$	2527	$2528^{+51}_{-50}$	$D_A(0.57)$	1379.6	$1379^{+23}_{-23}$
$A_{100 \times 143}^{dustTE}$	0.130	$0.133^{+0.057}_{-0.057}$	$D_{1420}$	816.7	$818^{+23}_{-23}$	$F_{AP}(0.57)$	0.6737	$0.6735^{+0.0060}_{-0.0058}$
$A_{100 \times 217}^{dustTE}$	0.308	$0.30^{+0.17}_{-0.16}$	$D_{2000}$	231.2	$231.5^{+8.6}_{-8.4}$	$f\sigma_8(0.57)$	0.4679	$0.467^{+0.025}_{-0.024}$
$A_{143}^{dustTE}$	0.143	$0.15^{+0.11}_{-0.11}$	$n_{s,0.002}$	0.9756	$0.977^{+0.021}_{-0.020}$	$\sigma_8(0.57)$	0.6039	$0.603^{+0.029}_{-0.028}$
$A_{143 \times 217}^{dustTE}$	0.347	$0.33^{+0.16}_{-0.16}$	$Y_P$	0.245407	$0.24541^{+0.00022}_{-0.00022}$	$r_{0.002}$	0.001	$< 0.146$
$A_{217}^{dustTE}$	1.68	$1.65^{+0.50}_{-0.50}$	$Y_P^{BBN}$	0.246734	$0.24674^{+0.00022}_{-0.00022}$	$r_{0.01}$	0.001	$< 0.146$
$c_{100}$	0.99920	$0.9992^{+0.0019}_{-0.0020}$	$10^5 D/H$	2.585	$2.585^{+0.092}_{-0.090}$	$\ln(10^{10} A_t)$	-3.58	$-0.4^{+2.0}_{-2.5}$
$H_0$	68.22	$68.3^{+1.8}_{-1.7}$	Age/Gyr	13.782	$13.779^{+0.073}_{-0.075}$	$r_{10}$	0.0006	$< 0.0751$
$\Omega_\Lambda$	0.6975	$0.698^{+0.022}_{-0.024}$	$z_*$	1089.68	$1089.66^{+0.81}_{-0.79}$	$10^9 A_t$	0.003	$< 0.307$
$\Omega_m$	0.3025	$0.302^{+0.024}_{-0.022}$	$r_*$	145.00	$145.03^{+0.95}_{-0.95}$	$10^9 A_t e^{-2\tau}$	0.002	$< 0.273$
$\Omega_m h^2$	0.14076	$0.1407^{+0.0038}_{-0.0037}$	$100\theta_*$	1.04119	$1.0412^{+0.0010}_{-0.0010}$	$\chi^2_{lowTEB}$	10493.14	$10495.7 (\nu: 3.1)$
$\Omega_m h^3$	0.09603	$0.0960^{+0.0011}_{-0.0010}$	$D_A/\text{Gpc}$	13.926	$13.928^{+0.089}_{-0.088}$	$\chi^2_{plikTE}$	931.9	$939.4 (\nu: 9.2)$
$\sigma_8$	0.8088	$0.807^{+0.040}_{-0.038}$	$z_{drag}$	1059.86	$1059.9^{+1.1}_{-1.1}$	$\chi^2_{prior}$	2.2	$7.8 (\nu: 6.6)$
$\sigma_8 \Omega_m^{0.5}$	0.4448	$0.444^{+0.031}_{-0.030}$	$r_{drag}$	147.66	$147.69^{+0.98}_{-0.98}$	$\chi^2_{CMB}$	11425.0	$11435.0 (\nu: 10.3)$

Best-fit  $\chi^2_{eff} = 11427.16$ ;  $\bar{\chi}^2_{eff} = 11442.90$ ;  $R - 1 = 0.00749$

$\chi^2_{eff}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10493.14 plik\_dx11dr2\_HM\_v18\_TE: 931.87

## 20.22 base\_r\_plikHM\_EE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02412	$0.0242^{+0.0028}_{-0.0026}$	$\sigma_8/h^{0.5}$	0.941	$0.932^{+0.092}_{-0.089}$	$100\theta_D$	0.15869	$0.1588^{+0.0028}_{-0.0027}$
$\Omega_c h^2$	0.1124	$0.1116^{+0.0097}_{-0.0090}$	$\langle d^2 \rangle^{1/2}$	2.355	$2.33^{+0.18}_{-0.17}$	$z_{\text{eq}}$	3262	$3246^{+180}_{-160}$
$100\theta_{\text{MC}}$	1.04010	$1.0402^{+0.0018}_{-0.0018}$	$z_{\text{re}}$	8.42	$8.0^{+3.9}_{-4.0}$	$k_{\text{eq}}$	0.00996	$0.00991^{+0.00055}_{-0.00050}$
$\tau$	0.0675	$0.064^{+0.042}_{-0.041}$	$10^9 A_s$	2.168	$2.15^{+0.19}_{-0.18}$	$100\theta_{\text{eq}}$	0.8437	$0.848^{+0.040}_{-0.040}$
$\ln(10^{10} A_s)$	3.076	$3.067^{+0.086}_{-0.085}$	$10^9 A_s e^{-2\tau}$	1.894	$1.889^{+0.052}_{-0.051}$	$100\theta_{s,\text{eq}}$	0.4638	$0.466^{+0.019}_{-0.019}$
$n_s$	0.9867	$0.993^{+0.030}_{-0.029}$	$D_{40}$	1223	$1235^{+61}_{-60}$	$r_{\text{drag}}/D_V(0.57)$	0.07383	$0.0742^{+0.0038}_{-0.0036}$
$r$	0.000	$< 0.199$	$D_{220}$	5991	$5971^{+430}_{-420}$	$H(0.57)$	94.99	$95.2^{+3.6}_{-3.4}$
$y_{\text{cal}}$	1.00010	$0.99998^{+0.0048}_{-0.0049}$	$D_{810}$	2592	$2591^{+81}_{-82}$	$D_A(0.57)$	1337	$1332^{+80}_{-77}$
$A_{100}^{\text{dustEE}}$	0.0826	$0.082^{+0.012}_{-0.012}$	$D_{1420}$	846.3	$848^{+39}_{-40}$	$F_{\text{AP}}(0.57)$	0.6651	$0.664^{+0.016}_{-0.015}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0500	$0.050^{+0.011}_{-0.011}$	$D_{2000}$	242.2	$243^{+15}_{-15}$	$f\sigma_8(0.57)$	0.4503	$0.446^{+0.043}_{-0.044}$
$A_{100 \times 217}^{\text{dustEE}}$	0.098	$0.099^{+0.064}_{-0.065}$	$n_{s,0.002}$	0.9867	$0.993^{+0.030}_{-0.029}$	$\sigma_8(0.57)$	0.6017	$0.598^{+0.029}_{-0.029}$
$A_{143}^{\text{dustEE}}$	0.1013	$0.101^{+0.014}_{-0.014}$	$Y_P$	0.24613	$0.2461^{+0.0011}_{-0.0011}$	$r_{0.002}$	0.000	$< 0.218$
$A_{143 \times 217}^{\text{dustEE}}$	0.222	$0.224^{+0.091}_{-0.091}$	$Y_P^{\text{BBN}}$	0.24746	$0.2475^{+0.0011}_{-0.0011}$	$r_{0.01}$	0.000	$< 0.208$
$A_{217}^{\text{dustEE}}$	0.645	$0.65^{+0.26}_{-0.25}$	$10^5 D/H$	2.296	$2.30^{+0.43}_{-0.41}$	$\ln(10^{10} A_t)$	-6.86	$0.0^{+2.0}_{-2.5}$
$H_0$	71.3	$71.7^{+5.9}_{-5.8}$	Age/Gyr	13.611	$13.60^{+0.32}_{-0.34}$	$r_{10}$	0.000	$< 0.111$
$\Omega_\Lambda$	0.730	$0.733^{+0.057}_{-0.060}$	$z_*$	1087.24	$1087.2^{+3.7}_{-3.6}$	$10^9 A_t$	0.000	$< 0.422$
$\Omega_m$	0.270	$0.267^{+0.060}_{-0.057}$	$r_*$	145.08	$145.2^{+1.4}_{-1.3}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.373$
$\Omega_m h^2$	0.1371	$0.1365^{+0.0075}_{-0.0069}$	$100\theta_*$	1.04011	$1.0402^{+0.0018}_{-0.0018}$	$\chi_{\text{lowTEB}}^2$	10493.6	$10496.1 (\nu: 4.0)$
$\Omega_m h^3$	0.09779	$0.0978^{+0.0041}_{-0.0037}$	$D_A/\text{Gpc}$	13.948	$13.96^{+0.13}_{-0.12}$	$\chi_{\text{plikEE}}^2$	751.0	$758.9 (\nu: 10.2)$
$\sigma_8$	0.795	$0.789^{+0.050}_{-0.050}$	$z_{\text{drag}}$	1063.3	$1063.4^{+5.3}_{-5.3}$	$\chi_{\text{prior}}^2$	4.1	$8.2 (\nu: 6.1)$
$\sigma_8 \Omega_m^{0.5}$	0.413	$0.408^{+0.068}_{-0.065}$	$r_{\text{drag}}$	147.20	$147.3^{+1.6}_{-1.6}$	$\chi_{\text{CMB}}^2$	11244.7	$11255.0 (\nu: 11.5)$
$\sigma_8 \Omega_m^{0.25}$	0.573	$0.567^{+0.063}_{-0.060}$	$k_D$	0.14194	$0.1418^{+0.0028}_{-0.0028}$			

Best-fit  $\chi_{\text{eff}}^2 = 11248.79$ ;  $\bar{\chi}_{\text{eff}}^2 = 11263.21$ ;  $R - 1 = 0.00738$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10493.64 plik\_dx11dr2\_HM\_v18\_EE: 751.05

## 20.23 base\_r\_CamSpecHM\_TE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022414	$0.02243^{+0.00048}_{-0.00047}$ (+0.1 $\sigma$ )	$z_{\text{re}}$	8.54	$8.4^{+3.9}_{-4.3}$ (+0.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07263	$0.0727^{+0.0014}_{-0.0014}$ (+0.8 $\sigma$ )
$\Omega_c h^2$	0.11616	$0.1160^{+0.0040}_{-0.0039}$ (-0.8 $\sigma$ )	$10^9 A_s$	2.098	$2.09^{+0.19}_{-0.18}$ (-0.1 $\sigma$ )	$H(0.57)$	93.49	$93.55^{+0.82}_{-0.77}$ (+0.7 $\sigma$ )
$100\theta_{\text{MC}}$	1.04124	$1.04135^{+0.00094}_{-0.00093}$ (+0.6 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.847	$1.842^{+0.053}_{-0.050}$ (-1.1 $\sigma$ )	$D_A(0.57)$	1371.3	$1370^{+23}_{-23}$ (-0.8 $\sigma$ )
$\tau$	0.0638	$0.064^{+0.041}_{-0.041}$ (+0.1 $\sigma$ )	$D_{40}$	1180	$1195^{+57}_{-52}$ (-0.8 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6714	$0.6711^{+0.0060}_{-0.0058}$ (-0.8 $\sigma$ )
$\ln(10^{10} A_s)$	3.044	$3.041^{+0.088}_{-0.088}$ (-0.1 $\sigma$ )	$D_{220}$	5630	$5608^{+150}_{-150}$ (-1.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4622	$0.461^{+0.025}_{-0.024}$ (-0.4 $\sigma$ )
$n_s$	0.9822	$0.985^{+0.021}_{-0.021}$ (+0.7 $\sigma$ )	$D_{810}$	2516	$2512^{+72}_{-69}$ (-0.6 $\sigma$ )	$\sigma_8(0.57)$	0.6019	$0.602^{+0.029}_{-0.028}$ (-0.1 $\sigma$ )
$r$	0.004	< 0.176 (+0.3 $\sigma$ )	$D_{1420}$	815.5	$815^{+29}_{-28}$ (-0.2 $\sigma$ )	$r_{0.002}$	0.003	< 0.182 (+0.3 $\sigma$ )
$y_{\text{cal}}$	1.00025	$1.0000^{+0.0050}_{-0.0049}$ (-0.0 $\sigma$ )	$n_{s,0.002}$	0.9822	$0.985^{+0.021}_{-0.021}$ (+0.7 $\sigma$ )	$r_{0.01}$	0.003	< 0.179 (+0.3 $\sigma$ )
$c_{TE}$	0.9987	$0.998^{+0.019}_{-0.019}$	$Y_P$	0.244991	$0.24500^{+0.00021}_{-0.00020}$ (-3.7 $\sigma$ )	$\ln(10^{10} A_t)$	-2.60	$-0.1^{+1.9}_{-2.4}$ (+0.2 $\sigma$ )
$H_0$	68.87	$69.0^{+1.8}_{-1.8}$ (+0.8 $\sigma$ )	Age/Gyr	13.766	$13.761^{+0.071}_{-0.073}$ (-0.5 $\sigma$ )	$r_{10}$	0.0017	< 0.0934 (+0.3 $\sigma$ )
$\Omega_\Lambda$	0.7065	$0.707^{+0.022}_{-0.023}$ (+0.8 $\sigma$ )	$z_*$	1089.51	$1089.48^{+0.81}_{-0.78}$ (-0.4 $\sigma$ )	$10^9 A_t$	0.007	< 0.366 (+0.3 $\sigma$ )
$\Omega_m$	0.2935	$0.293^{+0.023}_{-0.022}$ (-0.8 $\sigma$ )	$r_*$	145.40	$145.43^{+0.96}_{-0.97}$ (+0.8 $\sigma$ )	$10^9 A_t e^{-2\tau}$	0.007	< 0.323 (+0.3 $\sigma$ )
$\Omega_m h^2$	0.13922	$0.1391^{+0.0038}_{-0.0037}$ (-0.8 $\sigma$ )	$100\theta_*$	1.04144	$1.04154^{+0.00093}_{-0.00092}$ (+0.6 $\sigma$ )	$Y_P^{\text{BBN}}$	0.246322	$0.24633^{+0.00021}_{-0.00021}$ (-3.7 $\sigma$ )
$\Omega_m h^3$	0.09588	$0.0959^{+0.0010}_{-0.00097}$ (-0.2 $\sigma$ )	$z_{\text{drag}}$	1059.74	$1059.8^{+1.1}_{-0.99}$ (-0.2 $\sigma$ )	$\chi^2_{\text{lowTEB}}$	10492.15	$10494.5$ ( $\nu$ : 2.4) (-0.5 $\sigma$ )
$\sigma_8$	0.8032	$0.802^{+0.040}_{-0.037}$ (-0.3 $\sigma$ )	$r_{\text{drag}}$	148.07	$148.09^{+0.99}_{-1.0}$ (+0.8 $\sigma$ )	$\chi^2_{\text{CamSpec}}$	2694.7	$2699.6$ ( $\nu$ : 5.5)
$\sigma_8 \Omega_m^{0.5}$	0.4351	$0.434^{+0.030}_{-0.029}$ (-0.6 $\sigma$ )	$k_D$	0.13989	$0.1399^{+0.0011}_{-0.0011}$ (-0.7 $\sigma$ )	$\chi^2_{\text{prior}}$	9.97	$12.1$ ( $\nu$ : 2.2) (+1.2 $\sigma$ )
$\sigma_8 \Omega_m^{0.25}$	0.5912	$0.590^{+0.034}_{-0.032}$ (-0.5 $\sigma$ )	$100\theta_D$	0.16085	$0.16086^{+0.00061}_{-0.00060}$ (+0.2 $\sigma$ )	$\chi^2_{\text{CMB}}$	13186.9	$13194.0$ ( $\nu$ : 7.1) (+387.2 $\sigma$ )
$\sigma_8/h^{0.5}$	0.968	$0.966^{+0.051}_{-0.049}$ (-0.4 $\sigma$ )	$z_{\text{eq}}$	3311	$3309^{+92}_{-90}$ (-0.8 $\sigma$ )			
$\langle d^2 \rangle^{1/2}$	2.371	$2.36^{+0.11}_{-0.11}$ (-0.7 $\sigma$ )	$100\theta_{\text{eq}}$	0.8303	$0.831^{+0.018}_{-0.018}$ (+0.8 $\sigma$ )			

Best-fit  $\chi^2_{\text{eff}} = 13196.86$ ;  $\Delta\chi^2_{\text{eff}} = 1769.70$ ;  $\bar{\chi}^2_{\text{eff}} = 13206.09$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 1763.19$ ;  $R - 1 = 0.00518$

$\chi^2_{\text{eff}}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10492.15 ( $\Delta$  -0.99) CamSpec like\_v9.10CMH\_unified: 2694.74

## 20.24 base\_r\_CamSpecHM\_EE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02420	$0.0241^{+0.0021}_{-0.0020} \quad (-0.0\sigma)$	$z_{\text{re}}$	7.80	$7.6^{+3.5}_{-4.1} \quad (-0.2\sigma)$	$r_{\text{drag}}/D_V(0.57)$	0.07308	$0.0733^{+0.0031}_{-0.0030} \quad (-0.4\sigma)$
$\Omega_c h^2$	0.1145	$0.1139^{+0.0082}_{-0.0077} \quad (+0.5\sigma)$	$10^9 A_s$	2.136	$2.12^{+0.18}_{-0.18} \quad (-0.3\sigma)$	$H(0.57)$	94.72	$94.8^{+2.8}_{-2.7} \quad (-0.2\sigma)$
$100\theta_{\text{MC}}$	1.03989	$1.0400^{+0.0014}_{-0.0014} \quad (-0.2\sigma)$	$10^9 A_s e^{-2\tau}$	1.892	$1.883^{+0.057}_{-0.055} \quad (-0.2\sigma)$	$D_A(0.57)$	1346	$1344^{+65}_{-64} \quad (+0.3\sigma)$
$\tau$	0.0605	$0.060^{+0.040}_{-0.039} \quad (-0.2\sigma)$	$D_{40}$	1241	$1250^{+60}_{-55} \quad (+0.5\sigma)$	$F_{\text{AP}}(0.57)$	0.6679	$0.667^{+0.014}_{-0.012} \quad (+0.4\sigma)$
$\ln(10^{10} A_s)$	3.061	$3.055^{+0.085}_{-0.082} \quad (-0.3\sigma)$	$D_{220}$	5997	$5951^{+370}_{-360} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	0.4528	$0.450^{+0.036}_{-0.036} \quad (+0.2\sigma)$
$n_s$	0.9761	$0.981^{+0.025}_{-0.023} \quad (-0.8\sigma)$	$D_{810}$	2576	$2568^{+83}_{-82} \quad (-0.5\sigma)$	$\sigma_8(0.57)$	0.5979	$0.596^{+0.027}_{-0.026} \quad (-0.2\sigma)$
$r$	0.000	$< 0.194 \quad (-0.0\sigma)$	$D_{1420}$	837.9	$837^{+35}_{-35} \quad (-0.5\sigma)$	$r_{0.002}$	0.000	$< 0.203 \quad (-0.1\sigma)$
$y_{\text{cal}}$	1.00026	$1.0001^{+0.0050}_{-0.0049} \quad (+0.0\sigma)$	$n_{s,0.002}$	0.9761	$0.981^{+0.025}_{-0.023} \quad (-0.8\sigma)$	$r_{0.01}$	0.000	$< 0.199 \quad (-0.0\sigma)$
$c_{EE}$	0.9971	$0.996^{+0.019}_{-0.019}$	$Y_{\text{P}}$	0.24573	$0.24569^{+0.00081}_{-0.00083} \quad (-0.8\sigma)$	$\ln(10^{10} A_t)$	-6.55	$-0.1^{+2.0}_{-2.5} \quad (-0.0\sigma)$
$H_0$	70.51	$70.7^{+4.8}_{-4.7} \quad (-0.3\sigma)$	Age/Gyr	13.620	$13.62^{+0.25}_{-0.27} \quad (+0.1\sigma)$	$r_{10}$	0.000	$< 0.104 \quad (-0.0\sigma)$
$\Omega_\Lambda$	0.720	$0.721^{+0.049}_{-0.052} \quad (-0.4\sigma)$	$z_*$	1087.32	$1087.4^{+3.0}_{-2.7} \quad (+0.1\sigma)$	$10^9 A_t$	0.000	$< 0.409 \quad (-0.0\sigma)$
$\Omega_m$	0.280	$0.279^{+0.052}_{-0.049} \quad (+0.4\sigma)$	$r_*$	144.45	$144.7^{+1.2}_{-1.1} \quad (-0.8\sigma)$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.364 \quad (-0.0\sigma)$
$\Omega_m h^2$	0.1394	$0.1387^{+0.0065}_{-0.0061} \quad (+0.6\sigma)$	$100\theta_*$	1.03990	$1.0400^{+0.0014}_{-0.0014} \quad (-0.2\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	0.24705	$0.24702^{+0.00081}_{-0.00084} \quad (-0.8\sigma)$
$\Omega_m h^3$	0.09826	$0.0981^{+0.0031}_{-0.0029} \quad (+0.1\sigma)$	$z_{\text{drag}}$	1063.63	$1063.5^{+4.2}_{-4.1} \quad (+0.0\sigma)$	$\chi^2_{\text{lowTEB}}$	10495.0	$10497.5 \quad (\nu: 4.5) \quad (+0.5\sigma)$
$\sigma_8$	0.7933	$0.790^{+0.044}_{-0.044} \quad (+0.0\sigma)$	$r_{\text{drag}}$	146.54	$146.8^{+1.3}_{-1.2} \quad (-0.7\sigma)$	$\chi^2_{\text{CamSpec}}$	2186.4	$2191.3 \quad (\nu: 7.2)$
$\sigma_8 \Omega_m^{0.5}$	0.420	$0.417^{+0.057}_{-0.052} \quad (+0.3\sigma)$	$k_{\text{D}}$	0.14272	$0.1424^{+0.0022}_{-0.0022} \quad (+0.4\sigma)$	$\chi^2_{\text{prior}}$	10.12	$12.1 \quad (\nu: 2.2) \quad (+1.1\sigma)$
$\sigma_8 \Omega_m^{0.25}$	0.577	$0.574^{+0.053}_{-0.051} \quad (+0.2\sigma)$	$100\theta_{\text{D}}$	0.15846	$0.1586^{+0.0022}_{-0.0022} \quad (-0.1\sigma)$	$\chi^2_{\text{CMB}}$	12681.4	$12688.9 \quad (\nu: 7.5) \quad (+298.7\sigma)$
$\sigma_8/h^{0.5}$	0.945	$0.940^{+0.077}_{-0.075} \quad (+0.2\sigma)$	$z_{\text{eq}}$	3315	$3300^{+160}_{-150} \quad (+0.6\sigma)$			
$\langle d^2 \rangle^{1/2}$	2.380	$2.36^{+0.15}_{-0.15} \quad (+0.4\sigma)$	$100\theta_{\text{eq}}$	0.8336	$0.837^{+0.034}_{-0.034} \quad (-0.5\sigma)$			

Best-fit  $\chi^2_{\text{eff}} = 12691.52$ ;  $\Delta\chi^2_{\text{eff}} = 1442.73$ ;  $\bar{\chi}^2_{\text{eff}} = 12701.03$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 1437.82$ ;  $R - 1 = 0.00896$

$\chi^2_{\text{eff}}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.00 ( $\Delta$  1.36) CamSpec like\_v9.10CMH\_unified: 2186.40



## 20.25 base\_r\_plikHM\_TE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02228	$0.02227^{+0.00050}_{-0.00050}$	$\sigma_8 \Omega_m^{0.25}$	0.5975	$0.597^{+0.032}_{-0.030}$	$k_D$	0.14032	$0.1403^{+0.0011}_{-0.0011}$
$\Omega_c h^2$	0.11868	$0.1187^{+0.0042}_{-0.0041}$	$\sigma_8/h^{0.5}$	0.9740	$0.974^{+0.048}_{-0.045}$	$100\theta_D$	0.16093	$0.16094^{+0.00063}_{-0.00061}$
$100\theta_{MC}$	1.04095	$1.0409^{+0.0010}_{-0.0010}$	$\langle d^2 \rangle^{1/2}$	2.418	$2.41^{+0.11}_{-0.11}$	$z_{eq}$	3369	$3368^{+96}_{-93}$
$\tau$	0.0525	$< 0.0841$	$z_{re}$	7.50	$7.3^{+3.7}_{-4.3}$	$k_{eq}$	0.010281	$0.01028^{+0.00029}_{-0.00028}$
$\ln(10^{10} A_s)$	3.031	$3.029^{+0.079}_{-0.084}$	$10^9 A_s$	2.072	$2.07^{+0.17}_{-0.17}$	$100\theta_{eq}$	0.8191	$0.819^{+0.018}_{-0.018}$
$n_s$	0.9646	$0.966^{+0.023}_{-0.024}$	$10^9 A_s e^{-2\tau}$	1.8654	$1.864^{+0.037}_{-0.037}$	$100\theta_{s,eq}$	0.4525	$0.4526^{+0.0092}_{-0.0092}$
$r$	0.105	$< 0.378$	$D_{40}$	1261	$1279^{+100}_{-92}$	$r_{drag}/D_V(0.57)$	0.07175	$0.0718^{+0.0014}_{-0.0014}$
$y_{cal}$	1.00002	$1.0000^{+0.0050}_{-0.0048}$	$D_{220}$	5707	$5694^{+120}_{-120}$	$H(0.57)$	93.04	$93.04^{+0.82}_{-0.79}$
$A_{100}^{dustTE}$	0.141	$0.141^{+0.074}_{-0.074}$	$D_{810}$	2519	$2519^{+50}_{-51}$	$D_A(0.57)$	1385.9	$1386^{+24}_{-24}$
$A_{100 \times 143}^{dustTE}$	0.129	$0.135^{+0.057}_{-0.057}$	$D_{1420}$	809.6	$810^{+24}_{-24}$	$F_{AP}(0.57)$	0.6753	$0.6753^{+0.0065}_{-0.0061}$
$A_{100 \times 217}^{dustTE}$	0.298	$0.30^{+0.17}_{-0.16}$	$D_{2000}$	228.2	$228.4^{+9.0}_{-8.9}$	$f\sigma_8(0.57)$	0.4654	$0.465^{+0.023}_{-0.022}$
$A_{143}^{dustTE}$	0.153	$0.16^{+0.11}_{-0.10}$	$n_{s,0.002}$	0.9646	$0.966^{+0.023}_{-0.024}$	$\sigma_8(0.57)$	0.5971	$0.597^{+0.026}_{-0.026}$
$A_{143 \times 217}^{dustTE}$	0.351	$0.34^{+0.16}_{-0.16}$	$Y_P$	0.245354	$0.24535^{+0.00022}_{-0.00023}$	$r_{0.002}$	0.098	$< 0.400$
$A_{217}^{dustTE}$	1.70	$1.65^{+0.51}_{-0.51}$	$Y_P^{BBN}$	0.246680	$0.24667^{+0.00022}_{-0.00023}$	$r_{0.01}$	0.101	$< 0.389$
$c_{100}$	0.99937	$0.9992^{+0.0020}_{-0.0020}$	$10^5 D/H$	2.608	$2.610^{+0.096}_{-0.094}$	$\ln(10^{10} A_t)$	0.78	$0.8^{+1.7}_{-2.2}$
$H_0$	67.75	$67.7^{+1.8}_{-1.8}$	Age/Gyr	13.800	$13.802^{+0.076}_{-0.078}$	$r_{10}$	0.050	$< 0.213$
$\Omega_\Lambda$	0.6915	$0.691^{+0.024}_{-0.026}$	$z_*$	1089.92	$1089.93^{+0.86}_{-0.85}$	$10^9 A_t$	0.218	$< 0.780$
$\Omega_m$	0.3085	$0.309^{+0.026}_{-0.024}$	$r_*$	144.84	$144.85^{+0.97}_{-0.96}$	$10^9 A_t e^{-2\tau}$	0.196	$< 0.706$
$\Omega_m h^2$	0.14161	$0.1416^{+0.0040}_{-0.0039}$	$100\theta_*$	1.04114	$1.0411^{+0.0010}_{-0.00099}$	$\chi^2_{lowEB}$	5430.50	$5431.3 (\nu: 0.8)$
$\Omega_m h^3$	0.09594	$0.0959^{+0.0011}_{-0.0010}$	$D_A/\text{Gpc}$	13.912	$13.913^{+0.091}_{-0.090}$	$\chi^2_{plikTE}$	931.4	$939.4 (\nu: 9.0)$
$\sigma_8$	0.8017	$0.801^{+0.036}_{-0.036}$	$z_{drag}$	1059.63	$1059.6^{+1.1}_{-1.1}$	$\chi^2_{prior}$	1.8	$7.7 (\nu: 6.5)$
$\sigma_8 \Omega_m^{0.5}$	0.4453	$0.445^{+0.030}_{-0.028}$	$r_{drag}$	147.54	$147.6^{+1.0}_{-0.98}$	$\chi^2_{CMB}$	6361.9	$6370.8 (\nu: 9.4)$

Best-fit  $\chi^2_{eff} = 6363.76$ ;  $\bar{\chi}^2_{eff} = 6378.47$ ;  $R - 1 = 0.00621$

$\chi^2_{eff}$ : CMB - lowl\_QU\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 5430.50 plik\_dx11dr2\_HM\_v18\_TE: 931.42

## 20.26 base\_r\_plikHM\_EE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02376	$0.0238^{+0.0027}_{-0.0025}$	$\sigma_8/h^{0.5}$	0.931	$0.926^{+0.093}_{-0.093}$	$100\theta_D$	0.15911	$0.1592^{+0.0029}_{-0.0028}$
$\Omega_c h^2$	0.1123	$0.112^{+0.010}_{-0.010}$	$\langle d^2 \rangle^{1/2}$	2.319	$2.30^{+0.21}_{-0.20}$	$z_{\text{eq}}$	3252	$3246^{+200}_{-200}$
$100\theta_{\text{MC}}$	1.04011	$1.0402^{+0.0019}_{-0.0019}$	$z_{\text{re}}$	7.48	$7.0^{+3.4}_{-3.8}$	$k_{\text{eq}}$	0.00992	$0.00991^{+0.00062}_{-0.00060}$
$\tau$	0.0565	$0.053^{+0.035}_{-0.038}$	$10^9 A_s$	2.105	$2.09^{+0.17}_{-0.17}$	$100\theta_{\text{eq}}$	0.8447	$0.847^{+0.047}_{-0.044}$
$\ln(10^{10} A_s)$	3.047	$3.040^{+0.082}_{-0.079}$	$10^9 A_s e^{-2\tau}$	1.881	$1.880^{+0.059}_{-0.060}$	$100\theta_{s,\text{eq}}$	0.4646	$0.466^{+0.022}_{-0.021}$
$n_s$	0.9883	$0.991^{+0.039}_{-0.036}$	$D_{40}$	1425	$1426^{+200}_{-200}$	$r_{\text{drag}}/D_V(0.57)$	0.07380	$0.0740^{+0.0041}_{-0.0038}$
$r$	0.534	$< 0.985$	$D_{220}$	5914	$5911^{+430}_{-450}$	$H(0.57)$	94.72	$94.9^{+3.6}_{-3.4}$
$y_{\text{cal}}$	0.99995	$1.0003^{+0.0048}_{-0.0048}$	$D_{810}$	2577	$2577^{+81}_{-83}$	$D_A(0.57)$	1341	$1339^{+80}_{-81}$
$A_{100}^{\text{dustEE}}$	0.0753	$0.075^{+0.013}_{-0.014}$	$D_{1420}$	840.8	$842^{+39}_{-41}$	$F_{\text{AP}}(0.57)$	0.6654	$0.665^{+0.017}_{-0.017}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0412	$0.041^{+0.013}_{-0.013}$	$D_{2000}$	240.0	$240^{+15}_{-16}$	$f\sigma_8(0.57)$	0.4452	$0.442^{+0.044}_{-0.046}$
$A_{100 \times 217}^{\text{dustEE}}$	0.0998	$0.0996^{+0.064}_{-0.064}$	$n_{s,0.002}$	0.9883	$0.991^{+0.039}_{-0.036}$	$\sigma_8(0.57)$	0.5941	$0.591^{+0.027}_{-0.027}$
$A_{143}^{\text{dustEE}}$	0.0915	$0.092^{+0.016}_{-0.016}$	$Y_{\text{P}}$	0.24598	$0.2460^{+0.0011}_{-0.0011}$	$r_{0.002}$	0.64	$< 1.56$
$A_{143 \times 217}^{\text{dustEE}}$	0.216	$0.224^{+0.092}_{-0.092}$	$Y_{\text{P}}^{\text{BBN}}$	0.24731	$0.2473^{+0.0011}_{-0.0011}$	$r_{0.01}$	0.58	$< 1.21$
$A_{217}^{\text{dustEE}}$	0.677	$0.65^{+0.26}_{-0.25}$	$10^5 \text{D}/\text{H}$	2.352	$2.36^{+0.44}_{-0.42}$	$\ln(10^{10} A_t)$	2.42	$2.2^{+1.2}_{-1.7}$
$H_0$	71.0	$71.3^{+6.2}_{-5.8}$	Age/Gyr	13.646	$13.64^{+0.31}_{-0.34}$	$r_{10}$	0.342	$< 0.891$
$\Omega_\Lambda$	0.729	$0.729^{+0.061}_{-0.064}$	$z_*$	1087.63	$1087.6^{+3.7}_{-3.6}$	$10^9 A_t$	1.12	$< 2.00$
$\Omega_m$	0.271	$0.271^{+0.064}_{-0.061}$	$r_*$	145.38	$145.4^{+1.9}_{-1.7}$	$10^9 A_t e^{-2\tau}$	1.00	$< 1.83$
$\Omega_m h^2$	0.1367	$0.1365^{+0.0085}_{-0.0083}$	$100\theta_*$	1.04016	$1.0402^{+0.0019}_{-0.0019}$	$\chi_{\text{lowEB}}^2$	5429.68	$5430.6 (\nu: 1.2)$
$\Omega_m h^3$	0.09712	$0.0972^{+0.0041}_{-0.0037}$	$D_A/\text{Gpc}$	13.976	$13.98^{+0.17}_{-0.16}$	$\chi_{\text{plikEE}}^2$	750.6	$758.9 (\nu: 9.7)$
$\sigma_8$	0.785	$0.781^{+0.050}_{-0.051}$	$z_{\text{drag}}$	1062.5	$1062.6^{+5.4}_{-5.3}$	$\chi_{\text{prior}}^2$	2.4	$7.0 (\nu: 5.3)$
$\sigma_8 \Omega_m^{0.5}$	0.409	$0.406^{+0.071}_{-0.066}$	$r_{\text{drag}}$	147.61	$147.7^{+2.1}_{-1.9}$	$\chi_{\text{CMB}}^2$	6180.3	$6189.5 (\nu: 9.9)$
$\sigma_8 \Omega_m^{0.25}$	0.566	$0.563^{+0.065}_{-0.064}$	$k_D$	0.14127	$0.1412^{+0.0031}_{-0.0033}$			

Best-fit  $\chi_{\text{eff}}^2 = 6182.76$ ;  $\bar{\chi}_{\text{eff}}^2 = 6196.45$ ;  $R - 1 = 0.00867$

$\chi_{\text{eff}}^2$ : CMB - lowl\_QU\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 5429.68 plik\_dx11dr2\_HM\_v18\_EE: 750.65

## 20.27 base\_r\_CamSpecHM\_TE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022321	$0.02233^{+0.00049}_{-0.00048}$ (+0.2 $\sigma$ )	$z_{\text{re}}$	7.76	$7.4^{+3.7}_{-4.3}$ (+0.0 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07241	$0.0724^{+0.0014}_{-0.0013}$ (+0.9 $\sigma$ )
$\Omega_c h^2$	0.11683	$0.1169^{+0.0039}_{-0.0040}$ (-0.9 $\sigma$ )	$10^9 A_s$	2.066	$2.06^{+0.17}_{-0.18}$ (-0.1 $\sigma$ )	$H(0.57)$	93.35	$93.36^{+0.81}_{-0.76}$ (+0.8 $\sigma$ )
$100\theta_{\text{MC}}$	1.04126	$1.04126^{+0.00096}_{-0.00093}$ (+0.7 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.849	$1.848^{+0.052}_{-0.052}$ (-0.8 $\sigma$ )	$D_A(0.57)$	1375.5	$1376^{+23}_{-23}$ (-0.8 $\sigma$ )
$\tau$	0.0555	$0.053^{+0.034}_{-0.042}$ (+0.1 $\sigma$ )	$D_{40}$	1248	$1266^{+120}_{-110}$ (-0.3 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6724	$0.6725^{+0.0060}_{-0.0058}$ (-0.9 $\sigma$ )
$\ln(10^{10} A_s)$	3.028	$3.023^{+0.083}_{-0.086}$ (-0.1 $\sigma$ )	$D_{220}$	5638	$5638^{+160}_{-160}$ (-0.9 $\sigma$ )	$f\sigma_8(0.57)$	0.4605	$0.459^{+0.024}_{-0.022}$ (-0.5 $\sigma$ )
$n_s$	0.9772	$0.977^{+0.023}_{-0.023}$ (+0.9 $\sigma$ )	$D_{810}$	2513	$2512^{+71}_{-71}$ (-0.3 $\sigma$ )	$\sigma_8(0.57)$	0.5972	$0.596^{+0.027}_{-0.027}$ (-0.1 $\sigma$ )
$r$	0.168	< 0.442 (+0.4 $\sigma$ )	$D_{1420}$	812.4	$812^{+29}_{-29}$ (+0.2 $\sigma$ )	$r_{0.002}$	0.167	< 0.496 (+0.5 $\sigma$ )
$y_{\text{cal}}$	0.99965	$1.0000^{+0.0049}_{-0.0048}$ (+0.0 $\sigma$ )	$n_{s,0.002}$	0.9772	$0.977^{+0.023}_{-0.023}$ (+0.9 $\sigma$ )	$r_{0.01}$	0.167	< 0.467 (+0.4 $\sigma$ )
$c_{TE}$	1.0007	$1.000^{+0.019}_{-0.020}$	$Y_P$	0.244950	$0.24496^{+0.00021}_{-0.00020}$ (-3.4 $\sigma$ )	$\ln(10^{10} A_t)$	1.24	$1.1^{+1.5}_{-2.0}$ (+0.3 $\sigma$ )
$H_0$	68.55	$68.5^{+1.8}_{-1.7}$ (+0.9 $\sigma$ )	Age/Gyr	13.779	$13.778^{+0.071}_{-0.073}$ (-0.6 $\sigma$ )	$r_{10}$	0.086	< 0.265 (+0.5 $\sigma$ )
$\Omega_\Lambda$	0.7025	$0.702^{+0.022}_{-0.023}$ (+0.9 $\sigma$ )	$z_*$	1089.69	$1089.68^{+0.80}_{-0.80}$ (-0.6 $\sigma$ )	$10^9 A_t$	0.346	< 0.906 (+0.4 $\sigma$ )
$\Omega_m$	0.2975	$0.298^{+0.023}_{-0.022}$ (-0.9 $\sigma$ )	$r_*$	145.30	$145.28^{+0.98}_{-0.95}$ (+0.9 $\sigma$ )	$10^9 A_t e^{-2\tau}$	0.310	< 0.817 (+0.4 $\sigma$ )
$\Omega_m h^2$	0.13980	$0.1399^{+0.0037}_{-0.0038}$ (-0.9 $\sigma$ )	$100\theta_*$	1.04146	$1.04146^{+0.00096}_{-0.00093}$ (+0.7 $\sigma$ )	$Y_P^{\text{BBN}}$	0.246281	$0.24628^{+0.00021}_{-0.00021}$ (-3.4 $\sigma$ )
$\Omega_m h^3$	0.09584	$0.0959^{+0.0010}_{-0.00097}$ (-0.1 $\sigma$ )	$z_{\text{drag}}$	1059.59	$1059.6^{+1.1}_{-1.0}$ (-0.0 $\sigma$ )	$\chi^2_{\text{lowEB}}$	5430.35	$5431.2 (\nu: 0.8)$ (-0.1 $\sigma$ )
$\sigma_8$	0.7983	$0.796^{+0.037}_{-0.037}$ (-0.3 $\sigma$ )	$r_{\text{drag}}$	147.99	$148.0^{+1.0}_{-0.98}$ (+0.8 $\sigma$ )	$\chi^2_{\text{CamSpec}}$	2694.3	$2700.0 (\nu: 5.9)$
$\sigma_8 \Omega_m^{0.5}$	0.4354	$0.435^{+0.030}_{-0.028}$ (-0.7 $\sigma$ )	$k_D$	0.13990	$0.1399^{+0.0012}_{-0.0012}$ (-0.7 $\sigma$ )	$\chi^2_{\text{prior}}$	10.02	$12.0 (\nu: 1.9)$ (+1.2 $\sigma$ )
$\sigma_8 \Omega_m^{0.25}$	0.5896	$0.588^{+0.032}_{-0.031}$ (-0.6 $\sigma$ )	$100\theta_D$	0.16096	$0.16095^{+0.00063}_{-0.00062}$ (+0.0 $\sigma$ )	$\chi^2_{\text{CMB}}$	8124.6	$8131.2 (\nu: 6.5)$ (+405.4 $\sigma$ )
$\sigma_8/h^{0.5}$	0.9642	$0.962^{+0.049}_{-0.046}$ (-0.5 $\sigma$ )	$z_{\text{eq}}$	3325	$3327^{+90}_{-91}$ (-0.9 $\sigma$ )			
$\langle d^2 \rangle^{1/2}$	2.370	$2.36^{+0.11}_{-0.11}$ (-0.8 $\sigma$ )	$100\theta_{\text{eq}}$	0.8274	$0.827^{+0.018}_{-0.017}$ (+0.9 $\sigma$ )			

Best-fit  $\chi^2_{\text{eff}} = 8134.62$ ;  $\Delta\chi^2_{\text{eff}} = 1770.86$ ;  $\bar{\chi}^2_{\text{eff}} = 8143.19$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 1764.72$ ;  $R - 1 = 0.00957$

$\chi^2_{\text{eff}}$ : CMB - lowl-QU-70-dx11d-2014-10-03-v5c-Ap: 5430.35 ( $\Delta$  -0.14) CamSpec like-v9.10CMH-unified: 2694.25

## 20.28 base\_r\_CamSpecHM\_EE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02381	$0.0238^{+0.0021}_{-0.0020}$ $(-0.0\sigma)$	$z_{\text{re}}$	7.27	$7.1^{+3.3}_{-3.8}$ $(+0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	0.07312	$0.0732^{+0.0033}_{-0.0031}$ $(-0.4\sigma)$
$\Omega_c h^2$	0.1143	$0.1141^{+0.0088}_{-0.0083}$ $(+0.4\sigma)$	$10^9 A_s$	2.099	$2.09^{+0.17}_{-0.17}$ $(+0.0\sigma)$	$H(0.57)$	94.47	$94.5^{+2.8}_{-2.7}$ $(-0.2\sigma)$
$100\theta_{\text{MC}}$	1.03994	$1.0400^{+0.0015}_{-0.0015}$ $(-0.2\sigma)$	$10^9 A_s e^{-2\tau}$	1.883	$1.881^{+0.062}_{-0.062}$ $(+0.0\sigma)$	$D_A(0.57)$	1350	$1350^{+66}_{-64}$ $(+0.3\sigma)$
$\tau$	0.0542	$0.053^{+0.036}_{-0.035}$ $(+0.0\sigma)$	$D_{40}$	1380	$1381^{+150}_{-140}$ $(-0.4\sigma)$	$F_{\text{AP}}(0.57)$	0.6680	$0.668^{+0.014}_{-0.013}$ $(+0.3\sigma)$
$\ln(10^{10} A_s)$	3.044	$3.041^{+0.079}_{-0.077}$ $(+0.0\sigma)$	$D_{220}$	5922	$5907^{+370}_{-380}$ $(-0.0\sigma)$	$f\sigma_8(0.57)$	0.4502	$0.449^{+0.037}_{-0.037}$ $(+0.3\sigma)$
$n_s$	0.9802	$0.982^{+0.032}_{-0.030}$ $(-0.5\sigma)$	$D_{810}$	2569	$2566^{+83}_{-84}$ $(-0.3\sigma)$	$\sigma_8(0.57)$	0.5942	$0.593^{+0.025}_{-0.025}$ $(+0.1\sigma)$
$r$	0.403	$< 0.755$ $(-0.4\sigma)$	$D_{1420}$	836.3	$836^{+35}_{-36}$ $(-0.3\sigma)$	$r_{0.002}$	0.45	$< 1.04$ $(-0.4\sigma)$
$y_{\text{cal}}$	1.00015	$1.0000^{+0.0050}_{-0.0049}$ $(-0.1\sigma)$	$n_{s,0.002}$	0.9802	$0.982^{+0.032}_{-0.030}$ $(-0.5\sigma)$	$r_{0.01}$	0.423	$< 0.875$ $(-0.4\sigma)$
$c_{EE}$	1.0004	$1.001^{+0.020}_{-0.020}$	$Y_P$	0.24557	$0.24556^{+0.00081}_{-0.00084}$ $(-0.8\sigma)$	$\ln(10^{10} A_t)$	2.13	$1.9^{+1.2}_{-1.6}$ $(-0.3\sigma)$
$H_0$	70.29	$70.4^{+4.9}_{-4.8}$ $(-0.3\sigma)$	Age/Gyr	13.656	$13.65^{+0.25}_{-0.26}$ $(+0.1\sigma)$	$r_{10}$	0.234	$< 0.574$ $(-0.4\sigma)$
$\Omega_\Lambda$	0.719	$0.719^{+0.052}_{-0.054}$ $(-0.3\sigma)$	$z_*$	1087.72	$1087.8^{+3.0}_{-2.9}$ $(+0.1\sigma)$	$10^9 A_t$	0.85	$< 1.56$ $(-0.4\sigma)$
$\Omega_m$	0.281	$0.281^{+0.054}_{-0.052}$ $(+0.3\sigma)$	$r_*$	144.82	$144.9^{+1.5}_{-1.4}$ $(-0.6\sigma)$	$10^9 A_t e^{-2\tau}$	0.76	$< 1.41$ $(-0.4\sigma)$
$\Omega_m h^2$	0.1387	$0.1386^{+0.0073}_{-0.0069}$ $(+0.5\sigma)$	$100\theta_*$	1.03998	$1.0400^{+0.0014}_{-0.0014}$ $(-0.2\sigma)$	$Y_P^{\text{BBN}}$	0.24689	$0.24688^{+0.00081}_{-0.00084}$ $(-0.8\sigma)$
$\Omega_m h^3$	0.09750	$0.0974^{+0.0031}_{-0.0030}$ $(+0.1\sigma)$	$z_{\text{drag}}$	1062.79	$1062.7^{+4.1}_{-4.1}$ $(+0.1\sigma)$	$\chi_{\text{lowEB}}^2$	5429.79	$5430.7 (\nu: 1.0)$ $(+0.1\sigma)$
$\sigma_8$	0.7886	$0.787^{+0.042}_{-0.043}$ $(+0.2\sigma)$	$r_{\text{drag}}$	147.03	$147.1^{+1.6}_{-1.6}$ $(-0.6\sigma)$	$\chi_{\text{CamSpec}}^2$	2183.9	$2189.7 (\nu: 5.9)$
$\sigma_8 \Omega_m^{0.5}$	0.418	$0.417^{+0.060}_{-0.055}$ $(+0.3\sigma)$	$k_D$	0.14195	$0.1418^{+0.0024}_{-0.0026}$ $(+0.4\sigma)$	$\chi_{\text{prior}}^2$	10.03	$12.1 (\nu: 2.1)$ $(+1.6\sigma)$
$\sigma_8 \Omega_m^{0.25}$	0.574	$0.573^{+0.055}_{-0.053}$ $(+0.3\sigma)$	$100\theta_D$	0.15893	$0.1590^{+0.0023}_{-0.0022}$ $(-0.1\sigma)$	$\chi_{\text{CMB}}^2$	7613.7	$7620.4 (\nu: 6.4)$ $(+321.3\sigma)$
$\sigma_8/h^{0.5}$	0.941	$0.939^{+0.078}_{-0.076}$ $(+0.3\sigma)$	$z_{\text{eq}}$	3299	$3296^{+170}_{-160}$ $(+0.5\sigma)$			
$\langle d^2 \rangle^{1/2}$	2.351	$2.34^{+0.18}_{-0.17}$ $(+0.4\sigma)$	$100\theta_{\text{eq}}$	0.8355	$0.837^{+0.037}_{-0.036}$ $(-0.4\sigma)$			

Best-fit  $\chi_{\text{eff}}^2 = 7623.76$ ;  $\Delta\chi_{\text{eff}}^2 = 1441.00$ ;  $\bar{\chi}_{\text{eff}}^2 = 7632.50$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = 1436.05$ ;  $R - 1 = 0.00925$

$\chi_{\text{eff}}^2$ : CMB - lowl-QU-70-dx11d-2014-10-03-v5c-Ap: 5429.79 ( $\Delta$  0.11) CamSpec like.v9.10CMH\_unified: 2183.94

## 20.29 base\_r\_plikHM\_TT\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022279	$0.02226^{+0.00046}_{-0.00044}$	$\Omega_m h^3$	0.09596	$0.09588^{+0.00089}_{-0.00088}$	$100\theta_D$	0.16095	$0.16098^{+0.00052}_{-0.00051}$
$\Omega_c h^2$	0.11850	$0.1183^{+0.0040}_{-0.0039}$	$\sigma_8$	0.8160	$0.815^{+0.019}_{-0.018}$	$z_{\text{eq}}$	3364	$3360^{+90}_{-88}$
$100\theta_{\text{MC}}$	1.04104	$1.04103^{+0.00091}_{-0.00090}$	$\sigma_8 \Omega_m^{0.5}$	0.4523	$0.451^{+0.017}_{-0.018}$	$k_{\text{eq}}$	0.010268	$0.01026^{+0.00027}_{-0.00027}$
$\tau$	0.0671	$0.067^{+0.033}_{-0.032}$	$\sigma_8 \Omega_m^{0.25}$	0.6075	$0.606^{+0.015}_{-0.015}$	$100\theta_{\text{eq}}$	0.8200	$0.821^{+0.017}_{-0.017}$
$\ln(10^{10} A_s)$	3.065	$3.063^{+0.059}_{-0.058}$	$\sigma_8/h^{0.5}$	0.9906	$0.989^{+0.022}_{-0.022}$	$100\theta_{s,\text{eq}}$	0.4529	$0.4534^{+0.0089}_{-0.0087}$
$n_s$	0.9682	$0.969^{+0.012}_{-0.012}$	$\langle d^2 \rangle^{1/2}$	2.449	$2.445^{+0.051}_{-0.051}$	$r_{\text{drag}}/D_V(0.57)$	0.07183	$0.0719^{+0.0014}_{-0.0013}$
$r$	0.000	$< 0.120$	$z_{\text{re}}$	8.94	$8.8^{+2.9}_{-3.2}$	$H(0.57)$	93.08	$93.09^{+0.83}_{-0.78}$
$y_{\text{cal}}$	1.00011	$1.0002^{+0.0049}_{-0.0049}$	$10^9 A_s$	2.143	$2.14^{+0.13}_{-0.12}$	$D_A(0.57)$	1384.6	$1384^{+24}_{-24}$
$A_{217}^{\text{CIB}}$	67.4	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8738	$1.873^{+0.026}_{-0.026}$	$F_{\text{AP}}(0.57)$	0.6749	$0.6748^{+0.0062}_{-0.0061}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1225.2	$1239^{+36}_{-34}$	$f\sigma_8(0.57)$	0.4733	$0.472^{+0.010}_{-0.011}$
$A_{143}^{\text{tSZ}}$	7.16	$5.1^{+3.7}_{-3.9}$	$D_{220}$	5717	$5713^{+80}_{-79}$	$\sigma_8(0.57)$	0.6081	$0.607^{+0.017}_{-0.016}$
$A_{100}^{\text{PS}}$	254	$259^{+50}_{-50}$	$D_{810}$	2532.7	$2532^{+26}_{-27}$	$r_{0.002}$	0.000	$< 0.114$
$A_{143}^{\text{PS}}$	39.3	$44^{+20}_{-20}$	$D_{1420}$	815.0	$815^{+10}_{-10}$	$r_{0.01}$	0.000	$< 0.117$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{2000}$	230.26	$230.1^{+3.6}_{-3.7}$	$\ln(10^{10} A_t)$	-7.20	$-0.5^{+2.0}_{-2.5}$
$A_{217}^{\text{PS}}$	97.2	$97^{+20}_{-20}$	$n_{s,0.002}$	0.9682	$0.969^{+0.012}_{-0.012}$	$r_{10}$	0.0000	$< 0.0580$
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.245353	$0.24534^{+0.00020}_{-0.00020}$	$10^9 A_t$	0.000	$< 0.257$
$A_{100}^{\text{dustTT}}$	7.51	$7.5^{+3.7}_{-3.7}$	$Y_{\text{P}}^{\text{BBN}}$	0.246679	$0.24667^{+0.00020}_{-0.00020}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.224$
$A_{143}^{\text{dustTT}}$	9.03	$9.1^{+3.6}_{-3.6}$	$10^5 \text{D}/\text{H}$	2.608	$2.612^{+0.085}_{-0.085}$	$f_{2000}^{143}$	30.0	$30^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.2}_{-8.2}$	$\text{Age}/\text{Gyr}$	13.797	$13.798^{+0.073}_{-0.076}$	$f_{2000}^{143 \times 217}$	32.54	$33^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$z_*$	1089.90	$1089.92^{+0.81}_{-0.81}$	$f_{2000}^{217}$	106.13	$106.2^{+3.9}_{-3.9}$
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.89	$144.95^{+0.89}_{-0.88}$	$\chi^2_{\text{lensing}}$	9.29	$9.8 (\nu: 1.0)$
$c_{217}$	0.99603	$0.9960^{+0.0029}_{-0.0029}$	$100\theta_*$	1.04124	$1.04123^{+0.00089}_{-0.00088}$	$\chi^2_{\text{lowTEB}}$	10494.92	$10497.1 (\nu: 2.1)$
$H_0$	67.85	$67.9^{+1.8}_{-1.8}$	$D_A/\text{Gpc}$	13.915	$13.921^{+0.082}_{-0.082}$	$\chi^2_{\text{plik}}$	766.2	$779.7 (\nu: 15.7)$
$\Omega_\Lambda$	0.6928	$0.693^{+0.023}_{-0.025}$	$z_{\text{drag}}$	1059.63	$1059.56^{+0.91}_{-0.92}$	$\chi^2_{\text{prior}}$	2.1	$7.4 (\nu: 6.5)$
$\Omega_m$	0.3072	$0.307^{+0.025}_{-0.023}$	$r_{\text{drag}}$	147.59	$147.66^{+0.88}_{-0.88}$	$\chi^2_{\text{CMB}}$	11270.4	$11286.6 (\nu: 16.9)$
$\Omega_m h^2$	0.14143	$0.1413^{+0.0038}_{-0.0037}$	$k_D$	0.14027	$0.14019^{+0.00095}_{-0.00094}$			

Best-fit  $\chi^2_{\text{eff}} = 11272.43$ ;  $\bar{\chi}^2_{\text{eff}} = 11294.05$ ;  $R - 1 = 0.00754$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.29 lowl.SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10494.92 plik\_dx11dr2\_HM\_v18.TT: 766.18

### 20.30 base\_r\_plikHM\_TT\_lowTEB\_lensing\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022268	$0.02225^{+0.00039}_{-0.00039}$	$\sigma_8 \Omega_m^{0.5}$	0.4526	$0.452^{+0.013}_{-0.013}$	$100\theta_{s,eq}$	0.4529	$0.4530^{+0.0055}_{-0.0054}$
$\Omega_c h^2$	0.11852	$0.1185^{+0.0024}_{-0.0024}$	$\sigma_8 \Omega_m^{0.25}$	0.6078	$0.607^{+0.014}_{-0.014}$	$r_{drag}/D_V(0.57)$	0.07181	$0.07182^{+0.00083}_{-0.00081}$
$100\theta_{MC}$	1.04101	$1.04102^{+0.00081}_{-0.00081}$	$\sigma_8/h^{0.5}$	0.9910	$0.989^{+0.021}_{-0.021}$	$H(0.57)$	93.06	$93.05^{+0.54}_{-0.53}$
$\tau$	0.0673	$0.066^{+0.025}_{-0.025}$	$\langle d^2 \rangle^{1/2}$	2.4500	$2.445^{+0.050}_{-0.049}$	$D_A(0.57)$	1385.0	$1385^{+15}_{-15}$
$\ln(10^{10} A_s)$	3.0651	$3.061^{+0.047}_{-0.047}$	$z_{re}$	8.96	$8.8^{+2.4}_{-2.5}$	$F_{AP}(0.57)$	0.67501	$0.6750^{+0.0037}_{-0.0037}$
$n_s$	0.9682	$0.9683^{+0.0088}_{-0.0087}$	$10^9 A_s$	2.144	$2.14^{+0.10}_{-0.099}$	$f\sigma_8(0.57)$	0.4735	$0.473^{+0.010}_{-0.010}$
$r$	0.000	$< 0.119$	$10^9 A_s e^{-2\tau}$	1.8738	$1.873^{+0.022}_{-0.022}$	$\sigma_8(0.57)$	0.6081	$0.607^{+0.014}_{-0.014}$
$y_{cal}$	1.00016	$1.0002^{+0.0049}_{-0.0050}$	$D_{40}$	1225.1	$1240^{+35}_{-33}$	$r_{0.002}$	0.000	$< 0.113$
$A_{217}^{CIB}$	67.4	$64^{+10}_{-10}$	$D_{220}$	5716	$5712^{+79}_{-78}$	$r_{0.01}$	0.000	$< 0.116$
$\xi^{tSZ \times CIB}$	0.00	—	$D_{810}$	2532.5	$2532^{+27}_{-27}$	$\ln(10^{10} A_t)$	-5.92	$-0.5^{+2.0}_{-2.5}$
$A_{143}^{tSZ}$	7.19	$5.1^{+3.7}_{-3.9}$	$D_{1420}$	814.9	$814.7^{+9.9}_{-10}$	$r_{10}$	0.0001	$< 0.0576$
$A_{100}^{PS}$	256	$259^{+50}_{-60}$	$D_{2000}$	230.21	$230.1^{+3.5}_{-3.5}$	$10^9 A_t$	0.000	$< 0.254$
$A_{143}^{PS}$	39.5	$44^{+20}_{-20}$	$n_{s,0.002}$	0.9682	$0.9683^{+0.0088}_{-0.0087}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.223$
$A_{143 \times 217}^{PS}$	33	$39^{+20}_{-20}$	$Y_P$	0.245348	$0.24534^{+0.00018}_{-0.00018}$	$f_{2000}^{143}$	30.1	$30^{+6}_{-5}$
$A_{217}^{PS}$	97.3	$97^{+20}_{-20}$	$Y_P^{BBN}$	0.246674	$0.24666^{+0.00018}_{-0.00018}$	$f_{2000}^{143 \times 217}$	32.64	$33^{+4}_{-4}$
$A^{kSZ}$	0.0	—	$10^5 D/H$	2.611	$2.615^{+0.075}_{-0.074}$	$f_{2000}^{217}$	106.15	$106.2^{+3.8}_{-3.8}$
$A_{100}^{dustTT}$	7.34	$7.4^{+3.7}_{-3.6}$	Age/Gyr	13.799	$13.801^{+0.057}_{-0.057}$	$\chi^2_{lensing}$	9.34	$9.8 (\nu: 0.9)$
$A_{143}^{dustTT}$	9.14	$9.1^{+3.6}_{-3.6}$	$z_*$	1089.92	$1089.95^{+0.60}_{-0.59}$	$\chi^2_{lowTEB}$	10494.92	$10496.9 (\nu: 1.8)$
$A_{143 \times 217}^{dustTT}$	17.7	$17.3^{+8.2}_{-8.2}$	$r_*$	144.89	$144.91^{+0.61}_{-0.61}$	$\chi^2_{plik}$	766.2	$779.2 (\nu: 15.1)$
$A_{217}^{dustTT}$	81.9	$82^{+10}_{-10}$	$100\theta_*$	1.04120	$1.04121^{+0.00080}_{-0.00080}$	$\chi^2_{6DF}$	0.006	$0.045 (\nu: 0.0)$
$c_{100}$	0.99795	$0.9979^{+0.0015}_{-0.0015}$	$D_A/Gpc$	13.916	$13.918^{+0.060}_{-0.060}$	$\chi^2_{MGS}$	1.47	$1.54 (\nu: 0.2)$
$c_{217}$	0.99596	$0.9960^{+0.0028}_{-0.0028}$	$z_{drag}$	1059.59	$1059.54^{+0.90}_{-0.85}$	$\chi^2_{DR11CMass}$	2.40	$2.83 (\nu: 0.2)$
$H_0$	67.82	$67.8^{+1.1}_{-1.1}$	$r_{drag}$	147.60	$147.62^{+0.65}_{-0.66}$	$\chi^2_{DR11LOWZ}$	0.43	$0.56 (\nu: 0.1)$
$\Omega_\Lambda$	0.6925	$0.692^{+0.014}_{-0.015}$	$k_D$	0.14026	$0.14021^{+0.00085}_{-0.00084}$	$\chi^2_{prior}$	2.0	$7.4 (\nu: 6.4)$
$\Omega_m$	0.3075	$0.308^{+0.015}_{-0.014}$	$100\theta_D$	0.16096	$0.16100^{+0.00050}_{-0.00049}$	$\chi^2_{CMB}$	11270.5	$11285.9 (\nu: 16.1)$
$\Omega_m h^2$	0.14143	$0.1414^{+0.0023}_{-0.0023}$	$z_{eq}$	3364	$3364^{+56}_{-56}$	$\chi^2_{BAO}$	4.31	$4.97 (\nu: 0.4)$
$\Omega_m h^3$	0.09592	$0.09588^{+0.00090}_{-0.00088}$	$k_{eq}$	0.010269	$0.01027^{+0.00017}_{-0.00017}$			
$\sigma_8$	0.8161	$0.815^{+0.017}_{-0.017}$	$100\theta_{eq}$	0.8199	$0.820^{+0.011}_{-0.010}$			

Best-fit  $\chi^2_{eff} = 11276.77$ ;  $\bar{\chi}^2_{eff} = 11298.35$ ;  $R - 1 = 0.00674$   
 $\chi^2_{eff}$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMass: 2.40 DR11LOWZ: 0.43 CMB - smica\_g30\_ftl\_full\_pp: 9.34 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.92 plik\_dx11dr2\_HM\_v18\_TT: 766.23

### 20.31 base\_r\_plikHM\_TT\_lowTEB\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022284	$0.02227^{+0.00039}_{-0.00038}$	$\sigma_8 \Omega_m^{0.5}$	0.4518	$0.451^{+0.013}_{-0.013}$	$100\theta_{s,eq}$	0.4532	$0.4535^{+0.0053}_{-0.0052}$
$\Omega_c h^2$	0.11841	$0.1183^{+0.0023}_{-0.0024}$	$\sigma_8 \Omega_m^{0.25}$	0.6071	$0.606^{+0.014}_{-0.013}$	$r_{drag}/D_V(0.57)$	0.07186	$0.07190^{+0.00081}_{-0.00078}$
$100\theta_{MC}$	1.04106	$1.04105^{+0.00081}_{-0.00081}$	$\sigma_8/h^{0.5}$	0.9902	$0.989^{+0.021}_{-0.021}$	$H(0.57)$	93.10	$93.10^{+0.53}_{-0.52}$
$\tau$	0.0676	$0.067^{+0.025}_{-0.025}$	$\langle d^2 \rangle^{1/2}$	2.4469	$2.445^{+0.050}_{-0.049}$	$D_A(0.57)$	1384.0	$1384^{+15}_{-15}$
$\ln(10^{10} A_s)$	3.0649	$3.064^{+0.047}_{-0.047}$	$z_{re}$	8.98	$8.9^{+2.2}_{-2.5}$	$F_{AP}(0.57)$	0.67479	$0.6746^{+0.0036}_{-0.0035}$
$n_s$	0.9689	$0.9689^{+0.0086}_{-0.0087}$	$10^9 A_s$	2.143	$2.14^{+0.10}_{-0.099}$	$f\sigma_8(0.57)$	0.4731	$0.472^{+0.010}_{-0.010}$
$r$	0.000	$< 0.119$	$10^9 A_s e^{-2\tau}$	1.8723	$1.872^{+0.022}_{-0.022}$	$\sigma_8(0.57)$	0.6081	$0.608^{+0.014}_{-0.014}$
$y_{cal}$	0.99994	$1.0002^{+0.0049}_{-0.0050}$	$D_{40}$	1222.9	$1239^{+35}_{-33}$	$r_{0.002}$	0.000	$< 0.114$
$A_{217}^{CIB}$	67.2	$64^{+10}_{-10}$	$D_{220}$	5712	$5714^{+78}_{-78}$	$r_{0.01}$	0.000	$< 0.117$
$\xi^{tSZ \times CIB}$	0.00	—	$D_{810}$	2531.4	$2532^{+27}_{-27}$	$\ln(10^{10} A_t)$	-6.13	$-0.5^{+2.0}_{-2.5}$
$A_{143}^{tSZ}$	7.15	$5.1^{+3.7}_{-3.9}$	$D_{1420}$	814.9	$814.9^{+9.9}_{-10}$	$r_{10}$	0.0000	$< 0.0579$
$A_{100}^{PS}$	254	$259^{+50}_{-60}$	$D_{2000}$	230.25	$230.2^{+3.4}_{-3.5}$	$10^9 A_t$	0.000	$< 0.256$
$A_{143}^{PS}$	39.0	$44^{+20}_{-20}$	$n_{s,0.002}$	0.9689	$0.9689^{+0.0086}_{-0.0087}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.223$
$A_{143 \times 217}^{PS}$	32	$39^{+20}_{-20}$	$Y_P$	0.245355	$0.24535^{+0.00017}_{-0.00018}$	$f_{2000}^{143}$	29.9	$30^{+6}_{-5}$
$A_{217}^{PS}$	97.0	$97^{+20}_{-20}$	$Y_P^{BBN}$	0.246681	$0.24667^{+0.00017}_{-0.00018}$	$f_{2000}^{143 \times 217}$	32.41	$33^{+4}_{-4}$
$A^{kSZ}$	0.0	—	$10^5 D/H$	2.608	$2.611^{+0.074}_{-0.073}$	$f_{2000}^{217}$	105.94	$106.1^{+3.8}_{-3.8}$
$A_{100}^{dustTT}$	7.49	$7.4^{+3.7}_{-3.6}$	Age/Gyr	13.795	$13.796^{+0.055}_{-0.056}$	$\chi^2_{lensing}$	9.17	$9.7 (\nu: 0.9)$
$A_{143}^{dustTT}$	9.08	$9.1^{+3.6}_{-3.6}$	$z_*$	1089.89	$1089.90^{+0.58}_{-0.58}$	$\chi^2_{lowTEB}$	10494.77	$10496.9 (\nu: 1.8)$
$A_{143 \times 217}^{dustTT}$	17.7	$17.3^{+8.2}_{-8.2}$	$r_*$	144.91	$144.96^{+0.60}_{-0.60}$	$\chi^2_{plik}$	766.4	$779.3 (\nu: 15.1)$
$A_{217}^{dustTT}$	82.0	$82^{+10}_{-10}$	$100\theta_*$	1.04126	$1.04125^{+0.00080}_{-0.00080}$	$\chi^2_{H070p6}$	0.67	$0.68 (\nu: 0.0)$
$c_{100}$	0.99789	$0.9979^{+0.0015}_{-0.0015}$	$D_A/Gpc$	13.917	$13.921^{+0.059}_{-0.059}$	$\chi^2_{JLA}$	706.626	$706.66 (\nu: 0.0)$
$c_{217}$	0.99594	$0.9960^{+0.0028}_{-0.0028}$	$z_{drag}$	1059.63	$1059.58^{+0.86}_{-0.86}$	$\chi^2_{6DF}$	0.003	$0.038 (\nu: 0.0)$
$H_0$	67.89	$67.9^{+1.1}_{-1.1}$	$r_{drag}$	147.61	$147.66^{+0.65}_{-0.66}$	$\chi^2_{MGS}$	1.54	$1.66 (\nu: 0.2)$
$\Omega_\Lambda$	0.6934	$0.694^{+0.014}_{-0.014}$	$k_D$	0.14025	$0.14019^{+0.00086}_{-0.00084}$	$\chi^2_{DR11CMass}$	2.41	$2.83 (\nu: 0.2)$
$\Omega_m$	0.3066	$0.306^{+0.014}_{-0.014}$	$100\theta_D$	0.160951	$0.16098^{+0.00050}_{-0.00049}$	$\chi^2_{DR11LOWZ}$	0.37	$0.46 (\nu: 0.1)$
$\Omega_m h^2$	0.14134	$0.1412^{+0.0023}_{-0.0023}$	$z_{eq}$	3362	$3359^{+55}_{-54}$	$\chi^2_{prior}$	2.1	$7.4 (\nu: 6.4)$
$\Omega_m h^3$	0.09596	$0.09590^{+0.00090}_{-0.00088}$	$k_{eq}$	0.010261	$0.01025^{+0.00017}_{-0.00017}$	$\chi^2_{CMB}$	11270.4	$11285.9 (\nu: 16.1)$
$\sigma_8$	0.8159	$0.815^{+0.017}_{-0.017}$	$100\theta_{eq}$	0.8204	$0.821^{+0.010}_{-0.010}$	$\chi^2_{BAO}$	4.33	$4.98 (\nu: 0.4)$

Best-fit  $\chi^2_{eff} = 11984.07$ ;  $\bar{\chi}^2_{eff} = 12005.68$ ;  $R - 1 = 0.00663$   
 $\chi^2_{eff}$ : BAO - 6DF: 0.00 MGS: 1.54 DR11CMass: 2.41 DR11LOWZ: 0.37 CMB - smica\_g30\_ftl\_full\_pp: 9.17 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.77 plik\_dx11dr2\_HM\_v18\_TT: 766.41 Hubble - H070p6: 0.67 SN - JLA December\_2013: 706.63

## 20.32 base\_r\_plikHM\_TT\_lowTEB\_lensing\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02228^{+0.00045}_{-0.00043}$	$\Omega_m h^3$	$0.09589^{+0.00090}_{-0.00088}$	$100\theta_D$	$0.16097^{+0.00052}_{-0.00051}$
$\Omega_c h^2$	$0.1181^{+0.0036}_{-0.0038}$	$\sigma_8$	$0.816^{+0.017}_{-0.017}$	$z_{\text{eq}}$	$3355^{+81}_{-85}$
$100\theta_{\text{MC}}$	$1.04107^{+0.00089}_{-0.00087}$	$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.017}_{-0.018}$	$k_{\text{eq}}$	$0.01024^{+0.00025}_{-0.00026}$
$\tau$	$0.069^{+0.028}_{-0.027}$	$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.015}_{-0.015}$	$100\theta_{\text{eq}}$	$0.822^{+0.017}_{-0.016}$
$\ln(10^{10} A_s)$	$3.067^{+0.052}_{-0.049}$	$\sigma_8/h^{0.5}$	$0.990^{+0.021}_{-0.022}$	$100\theta_{\text{s,eq}}$	$0.4539^{+0.0085}_{-0.0083}$
$n_s$	$0.969^{+0.012}_{-0.011}$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.050}_{-0.049}$	$r_{\text{drag}}/D_V(0.57)$	$0.0720^{+0.0013}_{-0.0013}$
$r$	$< 0.119$	$z_{\text{re}}$	$< 11.3$	$H(0.57)$	$93.13^{+0.79}_{-0.76}$
$y_{\text{cal}}$	$1.0002^{+0.0049}_{-0.0050}$	$10^9 A_s$	$2.15^{+0.11}_{-0.11}$	$D_A(0.57)$	$1383^{+21}_{-23}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	$1.871^{+0.024}_{-0.025}$	$F_{\text{AP}}(0.57)$	$0.6744^{+0.0055}_{-0.0059}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1239^{+36}_{-33}$	$f\sigma_8(0.57)$	$0.473^{+0.010}_{-0.011}$
$A_{143}^{\text{tSZ}}$	$5.1^{+3.7}_{-3.9}$	$D_{220}$	$5713^{+80}_{-79}$	$\sigma_8(0.57)$	$0.609^{+0.015}_{-0.014}$
$A_{100}^{\text{PS}}$	$259^{+50}_{-60}$	$D_{810}$	$2531^{+26}_{-27}$	$r_{0.002}$	$< 0.114$
$A_{143}^{\text{PS}}$	$44^{+20}_{-20}$	$D_{1420}$	$814.9^{+9.9}_{-10}$	$r_{0.01}$	$< 0.117$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$D_{2000}$	$230.2^{+3.6}_{-3.6}$	$\ln(10^{10} A_t)$	$-0.5^{+2.0}_{-2.5}$
$A_{217}^{\text{PS}}$	$97^{+20}_{-20}$	$n_{\text{s},0.002}$	$0.969^{+0.012}_{-0.011}$	$r_{10}$	$< 0.0579$
$A^{\text{kSZ}}$	—	$Y_{\text{P}}$	$0.24535^{+0.00020}_{-0.00019}$	$10^9 A_t$	$< 0.257$
$A_{100}^{\text{dustTT}}$	$7.5^{+3.7}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24668^{+0.00020}_{-0.00020}$	$10^9 A_t e^{-2\tau}$	$< 0.223$
$A_{143}^{\text{dustTT}}$	$9.1^{+3.6}_{-3.6}$	$10^5 D/H$	$2.609^{+0.082}_{-0.083}$	$f_{2000}^{143}$	$30^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.2^{+8.2}_{-8.3}$	$\text{Age/Gyr}$	$13.794^{+0.069}_{-0.074}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$z_*$	$1089.88^{+0.76}_{-0.78}$	$f_{2000}^{217}$	$106.1^{+3.9}_{-3.9}$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	$144.99^{+0.87}_{-0.81}$	$\chi_{\text{lensing}}^2$	$9.8 (\nu: 1.1)$
$c_{217}$	$0.9960^{+0.0029}_{-0.0028}$	$100\theta_*$	$1.04126^{+0.00087}_{-0.00085}$	$\chi_{\text{lowTEB}}^2$	$10497.0 (\nu: 1.9)$
$H_0$	$68.0^{+1.7}_{-1.7}$	$D_A/\text{Gpc}$	$13.925^{+0.080}_{-0.077}$	$\chi_{\text{plik}}^2$	$779.6 (\nu: 16.0)$
$\Omega_\Lambda$	$0.695^{+0.023}_{-0.022}$	$z_{\text{drag}}$	$1059.58^{+0.93}_{-0.89}$	$\chi_{\text{prior}}^2$	$7.4 (\nu: 6.4)$
$\Omega_m$	$0.305^{+0.022}_{-0.023}$	$r_{\text{drag}}$	$147.70^{+0.86}_{-0.82}$	$\chi_{\text{CMB}}^2$	$11286.4 (\nu: 16.8)$
$\Omega_m h^2$	$0.1411^{+0.0034}_{-0.0036}$	$k_D$	$0.14016^{+0.00092}_{-0.00092}$		

$$\bar{\chi}_{\text{eff}}^2 = 11293.84; R - 1 = 0.00588$$



### 20.33 base\_r\_plikHM\_TTTEEE\_lowTEB\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022264	$0.02226^{+0.00032}_{-0.00031}$	$A_{143 \times 217}^{\text{dustTE}}$	0.335	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.901	$13.904^{+0.056}_{-0.057}$
$\Omega_c h^2$	0.11920	$0.1191^{+0.0029}_{-0.0028}$	$A_{217}^{\text{dustTE}}$	1.66	$1.66^{+0.50}_{-0.50}$	$z_{\text{drag}}$	1059.63	$1059.63^{+0.64}_{-0.65}$
$100\theta_{\text{MC}}$	1.04085	$1.04087^{+0.00063}_{-0.00063}$	$c_{100}$	0.99817	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.42	$147.45^{+0.59}_{-0.59}$
$\tau$	0.0629	$0.063^{+0.027}_{-0.027}$	$c_{217}$	0.99608	$0.9961^{+0.0028}_{-0.0028}$	$k_D$	0.14044	$0.14041^{+0.00062}_{-0.00062}$
$\ln(10^{10} A_s)$	3.0582	$3.059^{+0.050}_{-0.049}$	$H_0$	67.52	$67.6^{+1.3}_{-1.3}$	$100\theta_D$	0.160918	$0.16093^{+0.00036}_{-0.00036}$
$n_s$	0.9657	$0.9663^{+0.0095}_{-0.0095}$	$\Omega_\Lambda$	0.6883	$0.689^{+0.017}_{-0.018}$	$z_{\text{eq}}$	3381	$3378^{+64}_{-62}$
$r$	0.000	$< 0.119$	$\Omega_m$	0.3117	$0.311^{+0.018}_{-0.017}$	$k_{\text{eq}}$	0.010318	$0.01031^{+0.00019}_{-0.00019}$
$y_{\text{cal}}$	1.00001	$1.0002^{+0.0050}_{-0.0048}$	$\Omega_m h^2$	0.14211	$0.1420^{+0.0027}_{-0.0026}$	$100\theta_{\text{eq}}$	0.8168	$0.817^{+0.012}_{-0.012}$
$A_{217}^{\text{CIB}}$	68.1	$65^{+10}_{-10}$	$\Omega_m h^3$	0.09596	$0.09595^{+0.00059}_{-0.00058}$	$100\theta_{s,\text{eq}}$	0.4513	$0.4516^{+0.0061}_{-0.0062}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\sigma_8$	0.8148	$0.815^{+0.017}_{-0.017}$	$r_{\text{drag}}/D_V(0.57)$	0.07157	$0.07160^{+0.00095}_{-0.00096}$
$A_{143}^{\text{tSZ}}$	7.31	$5.3^{+3.6}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	0.4549	$0.455^{+0.014}_{-0.014}$	$H(0.57)$	92.95	$92.97^{+0.56}_{-0.55}$
$A_{100}^{\text{PS}}$	259	$261^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6088	$0.609^{+0.013}_{-0.014}$	$D_A(0.57)$	1388.9	$1388^{+17}_{-17}$
$A_{143}^{\text{PS}}$	39.0	$44^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9915	$0.991^{+0.020}_{-0.021}$	$F_{\text{AP}}(0.57)$	0.67608	$0.6759^{+0.0045}_{-0.0043}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4538	$2.453^{+0.049}_{-0.050}$	$f\sigma_8(0.57)$	0.4738	$0.4737^{+0.0097}_{-0.010}$
$A_{217}^{\text{PS}}$	96.3	$96^{+20}_{-20}$	$z_{\text{re}}$	8.55	$8.5^{+2.6}_{-2.7}$	$\sigma_8(0.57)$	0.6061	$0.606^{+0.015}_{-0.014}$
$A^{\text{kSZ}}$	0.00	$< 8.17$	$10^9 A_s$	2.129	$2.13^{+0.11}_{-0.10}$	$r_{0.002}$	0.000	$< 0.112$
$A_{100}^{\text{dustTT}}$	7.50	$7.5^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8773	$1.877^{+0.023}_{-0.023}$	$r_{0.01}$	0.000	$< 0.116$
$A_{143}^{\text{dustTT}}$	9.03	$9.1^{+3.5}_{-3.6}$	$D_{40}$	1230.1	$1245^{+34}_{-31}$	$\ln(10^{10} A_t)$	-5.19	$-0.5^{+1.9}_{-2.4}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.2^{+8.1}_{-8.0}$	$D_{220}$	5723	$5722^{+77}_{-76}$	$r_{10}$	0.0001	$< 0.0575$
$A_{217}^{\text{dustTT}}$	81.7	$82^{+10}_{-10}$	$D_{810}$	2533.4	$2534^{+27}_{-26}$	$10^9 A_t$	0.001	$< 0.253$
$A_{100}^{\text{dustEE}}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	814.5	$814.9^{+9.7}_{-9.4}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.223$
$A_{100 \times 143}^{\text{dustEE}}$	0.0490	$0.0485^{+0.0097}_{-0.0098}$	$D_{2000}$	229.99	$230.1^{+3.3}_{-3.2}$	$f_{2000}^{143}$	30.0	$30^{+5}_{-5}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.099^{+0.064}_{-0.063}$	$n_{s,0.002}$	0.9657	$0.9663^{+0.0095}_{-0.0095}$	$f_{2000}^{143 \times 217}$	32.68	$33^{+4}_{-4}$
$A_{143}^{\text{dustEE}}$	0.1004	$0.0997^{+0.014}_{-0.013}$	$Y_P$	0.245346	$0.24534^{+0.00014}_{-0.00014}$	$f_{2000}^{217}$	106.17	$106.1^{+3.7}_{-3.6}$
$A_{143 \times 217}^{\text{dustEE}}$	0.225	$0.224^{+0.092}_{-0.091}$	$Y_P^{\text{BBN}}$	0.246673	$0.24667^{+0.00014}_{-0.00014}$	$\chi^2_{\text{lensing}}$	9.72	$10.3 (\nu: 1.6)$
$A_{217}^{\text{dustEE}}$	0.652	$0.65^{+0.25}_{-0.25}$	$10^5 D/H$	2.611	$2.611^{+0.059}_{-0.060}$	$\chi^2_{\text{lowTEB}}$	10495.31	$10497.5 (\nu: 1.9)$
$A_{100}^{\text{dustTE}}$	0.141	$0.142^{+0.075}_{-0.074}$	$\text{Age/Gyr}$	13.807	$13.806^{+0.051}_{-0.052}$	$\chi^2_{\text{plik}}$	2435.0	$2453.6 (\nu: 23.1)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.132^{+0.057}_{-0.058}$	$z_*$	1089.98	$1089.98^{+0.59}_{-0.57}$	$\chi^2_{\text{prior}}$	7.1	$19.3 (\nu: 15.1)$
$A_{100 \times 217}^{\text{dustTE}}$	0.301	$0.30^{+0.17}_{-0.17}$	$r_*$	144.72	$144.74^{+0.60}_{-0.61}$	$\chi^2_{\text{CMB}}$	12940.1	$12961.4 (\nu: 23.8)$
$A_{143}^{\text{dustTE}}$	0.155	$0.16^{+0.11}_{-0.11}$	$100\theta_*$	1.04104	$1.04106^{+0.00062}_{-0.00062}$			

Best-fit  $\chi^2_{\text{eff}} = 12947.18$ ;  $\bar{\chi}^2_{\text{eff}} = 12980.75$ ;  $R - 1 = 0.01158$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.72 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10495.32 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2435.04



### 20.34 base\_r\_plikHM\_TTTEEE\_lowTEB\_lensing\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022286	$0.02228^{+0.00028}_{-0.00028}$	$\mathbf{c_{100}}$	0.99818	$0.9981^{+0.0015}_{-0.0015}$	$100\theta_D$	0.160909	$0.16091^{+0.00035}_{-0.00035}$
$\Omega_c h^2$	0.11895	$0.1189^{+0.0021}_{-0.0020}$	$\mathbf{c_{217}}$	0.99605	$0.9960^{+0.0028}_{-0.0029}$	$z_{\text{eq}}$	3375.0	$3373^{+46}_{-45}$
$100\theta_{\text{MC}}$	1.04092	$1.04090^{+0.00059}_{-0.00060}$	$H_0$	67.65	$67.68^{+0.92}_{-0.93}$	$k_{\text{eq}}$	0.010301	$0.01029^{+0.00014}_{-0.00014}$
$\tau$	0.0669	$0.065^{+0.024}_{-0.024}$	$\Omega_\Lambda$	0.6900	$0.690^{+0.012}_{-0.013}$	$100\theta_{\text{eq}}$	0.8179	$0.8183^{+0.0087}_{-0.0087}$
$\ln(10^{10} A_s)$	3.0657	$3.062^{+0.045}_{-0.045}$	$\Omega_m$	0.3100	$0.310^{+0.013}_{-0.012}$	$100\theta_{s,\text{eq}}$	0.45187	$0.4521^{+0.0045}_{-0.0045}$
$n_s$	0.9665	$0.9669^{+0.0080}_{-0.0080}$	$\Omega_m h^2$	0.14188	$0.1418^{+0.0019}_{-0.0019}$	$r_{\text{drag}}/D_V(0.57)$	0.07166	$0.07169^{+0.00070}_{-0.00069}$
$r$	0.000	< 0.119	$\Omega_m h^3$	0.09599	$0.09595^{+0.00059}_{-0.00059}$	$H(0.57)$	93.011	$93.01^{+0.44}_{-0.42}$
$y_{\text{cal}}$	0.99995	$1.0003^{+0.0050}_{-0.0047}$	$\sigma_8$	0.8172	$0.815^{+0.017}_{-0.017}$	$D_A(0.57)$	1387.1	$1387^{+13}_{-12}$
$A_{217}^{\text{CIB}}$	67.6	$65^{+10}_{-10}$	$\sigma_8 \Omega_m^{0.5}$	0.4550	$0.454^{+0.012}_{-0.012}$	$F_{\text{AP}}(0.57)$	0.67564	$0.6756^{+0.0032}_{-0.0031}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\sigma_8 \Omega_m^{0.25}$	0.6098	$0.608^{+0.013}_{-0.013}$	$f\sigma_8(0.57)$	0.4747	$0.4735^{+0.0098}_{-0.0098}$
$A_{143}^{\text{tSZ}}$	7.30	$5.3^{+3.6}_{-3.8}$	$\sigma_8/h^{0.5}$	0.9935	$0.991^{+0.020}_{-0.020}$	$\sigma_8(0.57)$	0.6083	$0.607^{+0.014}_{-0.013}$
$A_{100}^{\text{PS}}$	258	$261^{+50}_{-50}$	$\langle d^2 \rangle^{1/2}$	2.4583	$2.452^{+0.048}_{-0.049}$	$r_{0.002}$	0.000	< 0.113
$A_{143}^{\text{PS}}$	38.5	$43^{+20}_{-20}$	$z_{\text{re}}$	8.93	$8.7^{+2.2}_{-2.4}$	$r_{0.01}$	0.000	< 0.116
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$10^9 A_s$	2.145	$2.137^{+0.097}_{-0.094}$	$\ln(10^{10} A_t)$	-6.98	$-0.5^{+1.9}_{-2.4}$
$A_{217}^{\text{PS}}$	96.7	$96^{+20}_{-20}$	$10^9 A_s e^{-2\tau}$	1.8762	$1.876^{+0.022}_{-0.021}$	$r_{10}$	0.0000	< 0.0577
$A^{\text{kSZ}}$	0.00	< 8.05	$D_{40}$	1229.4	$1244^{+34}_{-31}$	$10^9 A_t$	0.000	< 0.254
$A_{100}^{\text{dustTT}}$	7.52	$7.5^{+3.7}_{-3.7}$	$D_{220}$	5723	$5724^{+76}_{-74}$	$10^9 A_t e^{-2\tau}$	0.000	< 0.223
$A_{143}^{\text{dustTT}}$	9.02	$9.1^{+3.5}_{-3.6}$	$D_{810}$	2533.0	$2534^{+27}_{-26}$	$f_{2000}^{143}$	29.7	$30^{+5}_{-5}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.2^{+8.2}_{-8.1}$	$D_{1420}$	814.7	$815.1^{+9.6}_{-9.3}$	$f_{2000}^{143 \times 217}$	32.46	$32.5^{+3.6}_{-3.6}$
$A_{217}^{\text{dustTT}}$	81.8	$82^{+10}_{-10}$	$D_{2000}$	230.16	$230.2^{+3.1}_{-3.1}$	$f_{2000}^{217}$	106.05	$106.0^{+3.6}_{-3.4}$
$A_{100}^{\text{dustEE}}$	0.0814	$0.081^{+0.011}_{-0.011}$	$n_{s,0.002}$	0.9665	$0.9669^{+0.0080}_{-0.0080}$	$\chi^2_{\text{lensing}}$	9.99	10.2 ( $\nu$ : 1.5)
$A_{100 \times 143}^{\text{dustEE}}$	0.0491	$0.0485^{+0.0097}_{-0.0098}$	$Y_P$	0.245356	$0.24535^{+0.00013}_{-0.00013}$	$\chi^2_{\text{lowTEB}}$	10495.32	10497.3 ( $\nu$ : 1.8)
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.0998^{+0.064}_{-0.063}$	$Y_P^{\text{BBN}}$	0.246682	$0.24668^{+0.00013}_{-0.00013}$	$\chi^2_{\text{plik}}$	2434.8	2453.4 ( $\nu$ : 22.7)
$A_{143}^{\text{dustEE}}$	0.1005	$0.0998^{+0.014}_{-0.013}$	$10^5 \text{D}/\text{H}$	2.607	$2.608^{+0.053}_{-0.053}$	$\chi^2_{6\text{DF}}$	0.022	0.046 ( $\nu$ : 0.0)
$A_{143 \times 217}^{\text{dustEE}}$	0.223	$0.223^{+0.093}_{-0.092}$	$\text{Age}/\text{Gyr}$	13.8015	$13.802^{+0.042}_{-0.043}$	$\chi^2_{\text{MGS}}$	1.28	1.37 ( $\nu$ : 0.1)
$A_{217}^{\text{dustEE}}$	0.653	$0.65^{+0.26}_{-0.26}$	$z_*$	1089.933	$1089.93^{+0.46}_{-0.46}$	$\chi^2_{\text{DR11CMass}}$	2.45	2.74 ( $\nu$ : 0.1)
$A_{100}^{\text{dustTE}}$	0.141	$0.142^{+0.074}_{-0.074}$	$r_*$	144.768	$144.80^{+0.47}_{-0.48}$	$\chi^2_{\text{DR11LOWZ}}$	0.61	0.67 ( $\nu$ : 0.1)
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.132^{+0.057}_{-0.057}$	$100\theta_*$	1.04112	$1.04109^{+0.00058}_{-0.00059}$	$\chi^2_{\text{prior}}$	7.1	19.4 ( $\nu$ : 15.0)
$A_{100 \times 217}^{\text{dustTE}}$	0.302	$0.30^{+0.17}_{-0.17}$	$D_A/\text{Gpc}$	13.9051	$13.908^{+0.044}_{-0.045}$	$\chi^2_{\text{CMB}}$	12940.1	12961.0 ( $\nu$ : 23.0)
$A_{143}^{\text{dustTE}}$	0.154	$0.16^{+0.11}_{-0.11}$	$z_{\text{drag}}$	1059.67	$1059.65^{+0.60}_{-0.58}$	$\chi^2_{\text{BAO}}$	4.36	4.83 ( $\nu$ : 0.2)
$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.16}_{-0.16}$	$r_{\text{drag}}$	147.464	$147.49^{+0.48}_{-0.49}$			
$A_{217}^{\text{dustTE}}$	1.65	$1.66^{+0.50}_{-0.51}$	$k_D$	0.14041	$0.14038^{+0.00057}_{-0.00056}$			

Best-fit  $\chi^2_{\text{eff}} = 12951.61$ ;  $\bar{\chi}^2_{\text{eff}} = 12985.21$ ;  $R - 1 = 0.01694$   
 $\chi^2_{\text{eff}}$ : BAO - 6DF: 0.02 MGS: 1.28 DR11CMASS: 2.45 DR11LOWZ: 0.61 CMB - smica\_g30\_ftl\_full\_pp: 9.98 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.32 plik\_dx11dr2\_HM\_v18\_TT  
2434.81



20.35 base\_r\_plikHM\_TTTEEE\_lowTEB\_lensing\_post\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022311	$0.02230^{+0.00028}_{-0.00028}$	$\mathbf{c}_{100}$	0.99816	$0.9981^{+0.0015}_{-0.0015}$	$100\theta_D$	0.160878	$0.16090^{+0.00035}_{-0.00035}$
$\Omega_c h^2$	0.11880	$0.1187^{+0.0020}_{-0.0020}$	$\mathbf{c}_{217}$	0.99603	$0.9960^{+0.0028}_{-0.0029}$	$z_{\text{eq}}$	3372.1	$3369^{+46}_{-44}$
$100\theta_{\text{MC}}$	1.04091	$1.04092^{+0.00058}_{-0.00059}$	$H_0$	67.72	$67.77^{+0.90}_{-0.90}$	$k_{\text{eq}}$	0.010292	$0.01028^{+0.00014}_{-0.00014}$
$\tau$	0.0665	$0.066^{+0.024}_{-0.024}$	$\Omega_\Lambda$	0.6909	$0.692^{+0.012}_{-0.012}$	$100\theta_{\text{eq}}$	0.8185	$0.8192^{+0.0086}_{-0.0086}$
$\ln(10^{10} A_s)$	3.0649	$3.064^{+0.045}_{-0.045}$	$\Omega_m$	0.3091	$0.308^{+0.012}_{-0.012}$	$100\theta_{s,\text{eq}}$	0.45216	$0.4525^{+0.0044}_{-0.0044}$
$n_s$	0.9669	$0.9674^{+0.0079}_{-0.0080}$	$\Omega_m h^2$	0.14176	$0.1416^{+0.0019}_{-0.0019}$	$r_{\text{drag}}/D_V(0.57)$	0.07171	$0.07175^{+0.00067}_{-0.00067}$
$r$	0.000	< 0.119	$\Omega_m h^3$	0.09600	$0.09596^{+0.00059}_{-0.00059}$	$H(0.57)$	93.043	$93.05^{+0.43}_{-0.41}$
$y_{\text{cal}}$	1.00010	$1.0003^{+0.0050}_{-0.0047}$	$\sigma_8$	0.8164	$0.816^{+0.017}_{-0.017}$	$D_A(0.57)$	1386.1	$1386^{+12}_{-12}$
$A_{217}^{\text{CIB}}$	67.3	$64^{+10}_{-10}$	$\sigma_8 \Omega_m^{0.5}$	0.4539	$0.453^{+0.012}_{-0.012}$	$F_{\text{AP}}(0.57)$	0.67541	$0.6752^{+0.0031}_{-0.0030}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.06	—	$\sigma_8 \Omega_m^{0.25}$	0.6087	$0.608^{+0.013}_{-0.013}$	$f\sigma_8(0.57)$	0.4740	$0.4734^{+0.0097}_{-0.0098}$
$A_{143}^{\text{tSZ}}$	7.30	$5.4^{+3.6}_{-3.8}$	$\sigma_8/h^{0.5}$	0.9920	$0.991^{+0.020}_{-0.020}$	$\sigma_8(0.57)$	0.6079	$0.608^{+0.013}_{-0.013}$
$A_{100}^{\text{PS}}$	256	$261^{+50}_{-50}$	$\langle d^2 \rangle^{1/2}$	2.4550	$2.451^{+0.048}_{-0.049}$	$r_{0.002}$	0.000	< 0.113
$A_{143}^{\text{PS}}$	39.0	$43^{+20}_{-20}$	$z_{\text{re}}$	8.88	$8.8^{+2.2}_{-2.4}$	$r_{0.01}$	0.000	< 0.116
$A_{143 \times 217}^{\text{PS}}$	34.2	$39^{+20}_{-20}$	$10^9 A_s$	2.143	$2.141^{+0.098}_{-0.094}$	$\ln(10^{10} A_t)$	-6.26	$-0.5^{+1.9}_{-2.4}$
$A_{217}^{\text{PS}}$	97.2	$96^{+20}_{-20}$	$10^9 A_s e^{-2\tau}$	1.8762	$1.876^{+0.022}_{-0.021}$	$r_{10}$	0.0000	< 0.0579
$A^{\text{kSZ}}$	0.00	< 7.98	$D_{40}$	1229.0	$1244^{+34}_{-31}$	$10^9 A_t$	0.000	< 0.255
$A_{100}^{\text{dustTT}}$	7.43	$7.5^{+3.7}_{-3.7}$	$D_{220}$	5727	$5725^{+76}_{-73}$	$10^9 A_t e^{-2\tau}$	0.000	< 0.224
$A_{143}^{\text{dustTT}}$	9.13	$9.1^{+3.5}_{-3.5}$	$D_{810}$	2534.0	$2534^{+27}_{-26}$	$f_{2000}^{143}$	29.5	$30^{+5}_{-5}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.2}_{-8.1}$	$D_{1420}$	815.2	$815.3^{+9.6}_{-9.2}$	$f_{2000}^{143 \times 217}$	32.32	$32.4^{+3.6}_{-3.6}$
$A_{217}^{\text{dustTT}}$	81.8	$82^{+10}_{-10}$	$D_{2000}$	230.34	$230.3^{+3.1}_{-3.1}$	$f_{2000}^{217}$	105.86	$105.9^{+3.6}_{-3.5}$
$A_{100}^{\text{dustEE}}$	0.0813	$0.081^{+0.011}_{-0.011}$	$n_{s,0.002}$	0.9669	$0.9674^{+0.0079}_{-0.0080}$	$\chi^2_{\text{lensing}}$	9.81	10.2 ( $\nu$ : 1.5)
$A_{100 \times 143}^{\text{dustEE}}$	0.0491	$0.0486^{+0.0097}_{-0.0098}$	$Y_P$	0.245367	$0.24536^{+0.00012}_{-0.00013}$	$\chi^2_{\text{lowTEB}}$	10495.22	10497.3 ( $\nu$ : 1.8)
$A_{100 \times 217}^{\text{dustEE}}$	0.0999	$0.0999^{+0.064}_{-0.063}$	$Y_P^{\text{BBN}}$	0.246693	$0.24669^{+0.00012}_{-0.00013}$	$\chi^2_{\text{plik}}$	2435.2	2453.6 ( $\nu$ : 22.8)
$A_{143}^{\text{dustEE}}$	0.1006	$0.0999^{+0.014}_{-0.013}$	$10^5 \text{D}/\text{H}$	2.603	$2.605^{+0.053}_{-0.052}$	$\chi^2_{\text{H070p6}}$	0.749	0.74 ( $\nu$ : 0.0)
$A_{143 \times 217}^{\text{dustEE}}$	0.225	$0.224^{+0.093}_{-0.093}$	$\text{Age}/\text{Gyr}$	13.7987	$13.799^{+0.041}_{-0.042}$	$\chi^2_{\text{JLA}}$	706.683	706.70 ( $\nu$ : 0.0)
$A_{217}^{\text{dustEE}}$	0.650	$0.65^{+0.26}_{-0.26}$	$z_*$	1089.889	$1089.89^{+0.45}_{-0.45}$	$\chi^2_{6\text{DF}}$	0.016	0.037 ( $\nu$ : 0.0)
$A_{100}^{\text{dustTE}}$	0.140	$0.142^{+0.074}_{-0.074}$	$r_*$	144.787	$144.83^{+0.46}_{-0.46}$	$\chi^2_{\text{MGS}}$	1.34	1.46 ( $\nu$ : 0.1)
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.132^{+0.057}_{-0.057}$	$100\theta_*$	1.04110	$1.04111^{+0.00057}_{-0.00059}$	$\chi^2_{\text{DR11CMass}}$	2.43	2.70 ( $\nu$ : 0.1)
$A_{100 \times 217}^{\text{dustTE}}$	0.306	$0.30^{+0.17}_{-0.17}$	$D_A/\text{Gpc}$	13.9071	$13.911^{+0.044}_{-0.045}$	$\chi^2_{\text{DR11LOWZ}}$	0.54	0.58 ( $\nu$ : 0.1)
$A_{143}^{\text{dustTE}}$	0.154	$0.16^{+0.11}_{-0.11}$	$z_{\text{drag}}$	1059.70	$1059.67^{+0.60}_{-0.57}$	$\chi^2_{\text{prior}}$	7.1	19.4 ( $\nu$ : 15.0)
$A_{143 \times 217}^{\text{dustTE}}$	0.337	$0.34^{+0.16}_{-0.16}$	$r_{\text{drag}}$	147.476	$147.53^{+0.47}_{-0.48}$	$\chi^2_{\text{CMB}}$	12940.2	12961.0 ( $\nu$ : 23.0)
$A_{217}^{\text{dustTE}}$	1.67	$1.66^{+0.50}_{-0.51}$	$k_D$	0.14042	$0.14036^{+0.00057}_{-0.00056}$	$\chi^2_{\text{BAO}}$	4.33	4.78 ( $\nu$ : 0.2)

Best-fit  $\chi^2_{\text{eff}} = 13659.05$ ;  $\bar{\chi}^2_{\text{eff}} = 13692.64$ ;  $R - 1 = 0.01680$   
 $\chi^2_{\text{eff}}$ : BAO - 6DF: 0.02 MGS: 1.34 DR11CMASS: 2.43 DR11LOWZ: 0.55 CMB - smica\_g30\_ftl\_full\_pp: 9.81 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.22 plik\_dx11dr2\_HM\_v18\_TT  
2435.20 Hubble - H070p6: 0.75 SN - JLA December\_2013: 706.68

20.36 base\_r\_plikHM\_TTTEEE\_lowTEB\_lensing\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02227^{+0.00031}_{-0.00030}$	$A_{143 \times 217}^{\text{dustTE}}$	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	$13.905^{+0.055}_{-0.054}$
$\Omega_c h^2$	$0.1190^{+0.0027}_{-0.0027}$	$A_{217}^{\text{dustTE}}$	$1.66^{+0.50}_{-0.51}$	$z_{\text{drag}}$	$1059.64^{+0.64}_{-0.62}$
$100\theta_{\text{MC}}$	$1.04088^{+0.00062}_{-0.00062}$	$c_{100}$	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	$147.47^{+0.58}_{-0.56}$
$\tau$	$0.065^{+0.024}_{-0.023}$	$c_{217}$	$0.9960^{+0.0028}_{-0.0029}$	$k_D$	$0.14040^{+0.00060}_{-0.00061}$
$\ln(10^{10} A_s)$	$3.062^{+0.045}_{-0.043}$	$H_0$	$67.6^{+1.2}_{-1.2}$	$100\theta_D$	$0.16092^{+0.00036}_{-0.00037}$
$n_s$	$0.9666^{+0.0093}_{-0.0090}$	$\Omega_\Lambda$	$0.690^{+0.016}_{-0.017}$	$z_{\text{eq}}$	$3376^{+60}_{-60}$
$r$	$< 0.119$	$\Omega_m$	$0.310^{+0.017}_{-0.016}$	$k_{\text{eq}}$	$0.01030^{+0.00018}_{-0.00018}$
$y_{\text{cal}}$	$1.0002^{+0.0050}_{-0.0047}$	$\Omega_m h^2$	$0.1419^{+0.0025}_{-0.0025}$	$100\theta_{\text{eq}}$	$0.818^{+0.012}_{-0.011}$
$A_{217}^{\text{CIB}}$	$65^{+10}_{-10}$	$\Omega_m h^3$	$0.09595^{+0.00059}_{-0.00058}$	$100\theta_{\text{s,eq}}$	$0.4518^{+0.0060}_{-0.0057}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\sigma_8$	$0.816^{+0.016}_{-0.016}$	$r_{\text{drag}}/D_V(0.57)$	$0.07164^{+0.00093}_{-0.00089}$
$A_{143}^{\text{tSZ}}$	$5.3^{+3.6}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	$0.455^{+0.014}_{-0.014}$	$H(0.57)$	$92.99^{+0.55}_{-0.52}$
$A_{100}^{\text{PS}}$	$261^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.013}_{-0.013}$	$D_A(0.57)$	$1388^{+16}_{-16}$
$A_{143}^{\text{PS}}$	$43^{+20}_{-20}$	$\sigma_8/h^{0.5}$	$0.992^{+0.020}_{-0.019}$	$F_{\text{AP}}(0.57)$	$0.6758^{+0.0042}_{-0.0042}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	$2.455^{+0.048}_{-0.047}$	$f\sigma_8(0.57)$	$0.4741^{+0.0096}_{-0.0094}$
$A_{217}^{\text{PS}}$	$96^{+20}_{-20}$	$z_{\text{re}}$	$< 10.7$	$\sigma_8(0.57)$	$0.607^{+0.013}_{-0.013}$
$A^{\text{kSZ}}$	$< 8.07$	$10^9 A_s$	$2.138^{+0.096}_{-0.091}$	$r_{0.002}$	$< 0.112$
$A_{100}^{\text{dustTT}}$	$7.5^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.022}_{-0.022}$	$r_{0.01}$	$< 0.116$
$A_{143}^{\text{dustTT}}$	$9.1^{+3.6}_{-3.5}$	$D_{40}$	$1245^{+34}_{-31}$	$\ln(10^{10} A_t)$	$-0.5^{+1.9}_{-2.4}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.2^{+8.2}_{-8.1}$	$D_{220}$	$5722^{+76}_{-75}$	$r_{10}$	$< 0.0574$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$D_{810}$	$2534^{+27}_{-26}$	$10^9 A_t$	$< 0.254$
$A_{100}^{\text{dustEE}}$	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	$814.9^{+9.6}_{-9.4}$	$10^9 A_t e^{-2\tau}$	$< 0.223$
$A_{100 \times 143}^{\text{dustEE}}$	$0.0484^{+0.0097}_{-0.0098}$	$D_{2000}$	$230.2^{+3.2}_{-3.2}$	$f_{2000}^{143}$	$30^{+5}_{-5}$
$A_{100 \times 217}^{\text{dustEE}}$	$0.0996^{+0.064}_{-0.063}$	$n_{\text{s},0.002}$	$0.9666^{+0.0093}_{-0.0090}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A_{143}^{\text{dustEE}}$	$0.0998^{+0.014}_{-0.014}$	$Y_{\text{P}}$	$0.24535^{+0.00014}_{-0.00014}$	$f_{2000}^{217}$	$106.0^{+3.6}_{-3.5}$
$A_{143 \times 217}^{\text{dustEE}}$	$0.224^{+0.093}_{-0.092}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24668^{+0.00014}_{-0.00014}$	$\chi_{\text{lensing}}^2$	$10.4 (\nu: 1.7)$
$A_{217}^{\text{dustEE}}$	$0.65^{+0.25}_{-0.25}$	$10^5 \text{D/H}$	$2.610^{+0.057}_{-0.059}$	$\chi_{\text{lowTEB}}^2$	$10497.4 (\nu: 1.9)$
$A_{100}^{\text{dustTE}}$	$0.142^{+0.073}_{-0.074}$	$\text{Age/Gyr}$	$13.804^{+0.049}_{-0.051}$	$\chi_{\text{plik}}^2$	$2453.5 (\nu: 23.0)$
$A_{100 \times 143}^{\text{dustTE}}$	$0.132^{+0.057}_{-0.057}$	$z_*$	$1089.95^{+0.56}_{-0.57}$	$\chi_{\text{prior}}^2$	$19.4 (\nu: 14.9)$
$A_{100 \times 217}^{\text{dustTE}}$	$0.30^{+0.17}_{-0.17}$	$r_*$	$144.77^{+0.59}_{-0.57}$	$\chi_{\text{CMB}}^2$	$12961.2 (\nu: 23.5)$
$A_{143}^{\text{dustTE}}$	$0.16^{+0.11}_{-0.11}$	$100\theta_*$	$1.04108^{+0.00061}_{-0.00061}$		

$\bar{\chi}_{\text{eff}}^2 = 12980.61; R - 1 = 0.01566$



### 20.37 base\_r\_plikHM\_TT\_WMAPTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022213	$0.02220^{+0.00044}_{-0.00043}$	$\Omega_m h^3$	0.09602	$0.09596^{+0.00090}_{-0.00090}$	$100\theta_D$	0.16096	$0.16099^{+0.00052}_{-0.00051}$
$\Omega_c h^2$	0.12016	$0.1198^{+0.0042}_{-0.0040}$	$\sigma_8$	0.8273	$0.826^{+0.021}_{-0.020}$	$z_{\text{eq}}$	3402	$3395^{+95}_{-92}$
$100\theta_{\text{MC}}$	1.04083	$1.04086^{+0.00092}_{-0.00091}$	$\sigma_8 \Omega_m^{0.5}$	0.4660	$0.464^{+0.027}_{-0.025}$	$k_{\text{eq}}$	0.010384	$0.01036^{+0.00029}_{-0.00028}$
$\tau$	0.0732	$0.073^{+0.024}_{-0.021}$	$\sigma_8 \Omega_m^{0.25}$	0.6210	$0.619^{+0.024}_{-0.023}$	$100\theta_{\text{eq}}$	0.8128	$0.814^{+0.017}_{-0.018}$
$\ln(10^{10} A_s)$	3.0813	$3.080^{+0.046}_{-0.043}$	$\sigma_8/h^{0.5}$	1.0097	$1.007^{+0.034}_{-0.033}$	$100\theta_{s,\text{eq}}$	0.4492	$0.4500^{+0.0090}_{-0.0091}$
$n_s$	0.9647	$0.966^{+0.011}_{-0.012}$	$\langle d^2 \rangle^{1/2}$	2.494	$2.488^{+0.081}_{-0.077}$	$r_{\text{drag}}/D_V(0.57)$	0.07126	$0.0714^{+0.0014}_{-0.0014}$
$r$	0.0000	$< 0.0975$	$z_{\text{re}}$	9.56	$9.5^{+2.1}_{-2.0}$	$H(0.57)$	92.81	$92.85^{+0.78}_{-0.76}$
$y_{\text{cal}}$	1.00022	$1.0004^{+0.0048}_{-0.0049}$	$10^9 A_s$	2.179	$2.18^{+0.10}_{-0.092}$	$D_A(0.57)$	1393.9	$1392^{+25}_{-24}$
$A_{217}^{\text{CIB}}$	66.9	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8821	$1.881^{+0.027}_{-0.026}$	$F_{\text{AP}}(0.57)$	0.6775	$0.6771^{+0.0065}_{-0.0065}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.04	—	$D_{40}$	1236.4	$1247^{+36}_{-35}$	$f\sigma_8(0.57)$	0.4825	$0.481^{+0.016}_{-0.016}$
$A_{143}^{\text{tSZ}}$	7.06	$5.2^{+3.7}_{-3.8}$	$D_{220}$	5715	$5713^{+82}_{-78}$	$\sigma_8(0.57)$	0.6141	$0.614^{+0.014}_{-0.013}$
$A_{100}^{\text{PS}}$	255	$258^{+60}_{-50}$	$D_{810}$	2534.8	$2534^{+27}_{-27}$	$r_{0.002}$	0.0000	$< 0.0912$
$A_{143}^{\text{PS}}$	39.8	$44^{+20}_{-20}$	$D_{1420}$	814.6	$814.6^{+9.8}_{-10}$	$r_{0.01}$	0.0000	$< 0.0943$
$A_{143 \times 217}^{\text{PS}}$	34	$39^{+20}_{-20}$	$D_{2000}$	230.28	$230.2^{+3.5}_{-3.6}$	$\ln(10^{10} A_t)$	-7.21	$-0.8^{+2.1}_{-2.6}$
$A_{217}^{\text{PS}}$	97.8	$97^{+20}_{-20}$	$n_{s,0.002}$	0.9647	$0.966^{+0.011}_{-0.012}$	$r_{10}$	0.0000	$< 0.0465$
$A^{\text{kSZ}}$	0.00	$< 8.22$	$Y_{\text{P}}$	0.245323	$0.24532^{+0.00020}_{-0.00020}$	$10^9 A_t$	0.000	$< 0.212$
$A_{100}^{\text{dustTT}}$	7.31	$7.4^{+3.7}_{-3.7}$	$Y_{\text{P}}^{\text{BBN}}$	0.246650	$0.24664^{+0.00020}_{-0.00020}$	$10^9 A_t e^{-2\tau}$	0.000	$< 0.183$
$A_{143}^{\text{dustTT}}$	8.96	$9.0^{+3.6}_{-3.6}$	$10^5 \text{D}/\text{H}$	2.621	$2.624^{+0.084}_{-0.082}$	$f_{2000}^{143}$	29.8	$30^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.2^{+8.0}_{-8.1}$	$\text{Age}/\text{Gyr}$	13.817	$13.815^{+0.073}_{-0.071}$	$f_{2000}^{143 \times 217}$	32.41	$32^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$z_*$	1090.13	$1090.12^{+0.82}_{-0.77}$	$f_{2000}^{217}$	105.98	$106.1^{+3.9}_{-3.8}$
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.51	$144.60^{+0.94}_{-0.94}$	$\chi_{\text{WMAPTEB}}^2$	19734.4	$19736.8 (\nu: 3.7)$
$c_{217}$	0.99596	$0.9960^{+0.0028}_{-0.0028}$	$100\theta_*$	1.04103	$1.04106^{+0.00090}_{-0.00089}$	$\chi_{\text{plik}}^2$	763.8	$777.6 (\nu: 15.3)$
$H_0$	67.14	$67.3^{+1.8}_{-1.8}$	$D_A/\text{Gpc}$	13.881	$13.890^{+0.088}_{-0.087}$	$\chi_{\text{prior}}^2$	1.9	$7.3 (\nu: 6.3)$
$\Omega_\Lambda$	0.6827	$0.684^{+0.026}_{-0.026}$	$z_{\text{drag}}$	1059.59	$1059.53^{+0.90}_{-0.89}$	$\chi_{\text{CMB}}^2$	20498.2	$20514.4 (\nu: 16.8)$
$\Omega_m$	0.3173	$0.316^{+0.026}_{-0.026}$	$r_{\text{drag}}$	147.22	$147.32^{+0.94}_{-0.94}$			
$\Omega_m h^2$	0.14302	$0.1427^{+0.0040}_{-0.0039}$	$k_D$	0.14061	$0.1405^{+0.0010}_{-0.0010}$			

Best-fit  $\chi_{\text{eff}}^2 = 20500.14$ ;  $\bar{\chi}_{\text{eff}}^2 = 20521.78$ ;  $R - 1 = 0.01261$

$\chi_{\text{eff}}^2$ : CMB - bflike-WMAP353ggf\_LFI312\_nw8: 19734.37 plik\_dx11dr2\_HM\_v18\_TT: 763.84

### 20.38 base\_r\_plikHM\_TT\_WMAPTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02226^{+0.00040}_{-0.00042}$	$\Omega_m h^3$	$0.09589^{+0.00088}_{-0.00091}$	$100\theta_D$	$0.16099^{+0.00051}_{-0.00049}$
$\Omega_c h^2$	$0.1182^{+0.0031}_{-0.0031}$	$\sigma_8$	$0.817^{+0.014}_{-0.014}$	$z_{\text{eq}}$	$3357^{+72}_{-69}$
$100\theta_{\text{MC}}$	$1.04107^{+0.00089}_{-0.00087}$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.017}_{-0.016}$	$k_{\text{eq}}$	$0.01025^{+0.00022}_{-0.00021}$
$\tau$	$0.069^{+0.022}_{-0.019}$	$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.015}_{-0.014}$	$100\theta_{\text{eq}}$	$0.821^{+0.013}_{-0.014}$
$\ln(10^{10} A_s)$	$3.068^{+0.039}_{-0.039}$	$\sigma_8/h^{0.5}$	$0.991^{+0.020}_{-0.020}$	$100\theta_{s,\text{eq}}$	$0.4536^{+0.0068}_{-0.0069}$
$n_s$	$0.9692^{+0.0097}_{-0.010}$	$\langle d^2 \rangle^{1/2}$	$2.449^{+0.048}_{-0.046}$	$r_{\text{drag}}/D_V(0.57)$	$0.0719^{+0.0010}_{-0.0011}$
$r$	$< 0.107$	$z_{\text{re}}$	$9.1^{+1.9}_{-1.8}$	$H(0.57)$	$93.11^{+0.64}_{-0.66}$
$y_{\text{cal}}$	$1.0002^{+0.0046}_{-0.0048}$	$10^9 A_s$	$2.151^{+0.083}_{-0.083}$	$D_A(0.57)$	$1383^{+20}_{-19}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	$1.872^{+0.022}_{-0.022}$	$F_{\text{AP}}(0.57)$	$0.6746^{+0.0049}_{-0.0046}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1237^{+34}_{-33}$	$f\sigma_8(0.57)$	$0.4734^{+0.0098}_{-0.0099}$
$A_{143}^{\text{tSZ}}$	$5.1^{+3.7}_{-3.8}$	$D_{220}$	$5712^{+79}_{-77}$	$\sigma_8(0.57)$	$0.609^{+0.011}_{-0.011}$
$A_{100}^{\text{PS}}$	$258^{+50}_{-50}$	$D_{810}$	$2532^{+25}_{-26}$	$r_{0.002}$	$< 0.101$
$A_{143}^{\text{PS}}$	$44^{+10}_{-20}$	$D_{1420}$	$814.9^{+9.7}_{-9.6}$	$r_{0.01}$	$< 0.104$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$D_{2000}$	$230.2^{+3.4}_{-3.4}$	$\ln(10^{10} A_t)$	$-0.6^{+2.1}_{-2.5}$
$A_{217}^{\text{PS}}$	$97^{+20}_{-20}$	$n_{s,0.002}$	$0.9692^{+0.0097}_{-0.010}$	$r_{10}$	$< 0.0513$
$A^{\text{kSZ}}$	$< 8.36$	$Y_{\text{P}}$	$0.24534^{+0.00018}_{-0.00019}$	$10^9 A_t$	$< 0.230$
$A_{100}^{\text{dustTT}}$	$7.5^{+3.8}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24667^{+0.00018}_{-0.00019}$	$10^9 A_t e^{-2\tau}$	$< 0.200$
$A_{143}^{\text{dustTT}}$	$9.1^{+3.6}_{-3.6}$	$10^5 \text{D/H}$	$2.612^{+0.080}_{-0.075}$	$f_{2000}^{143}$	$30^{+5}_{-5}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.3^{+8.3}_{-8.1}$	$\text{Age/Gyr}$	$13.796^{+0.065}_{-0.062}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$z_*$	$1089.90^{+0.71}_{-0.67}$	$f_{2000}^{217}$	$106.1^{+3.9}_{-3.8}$
$c_{100}$	$0.9979^{+0.0016}_{-0.0015}$	$r_*$	$144.97^{+0.77}_{-0.73}$	$\chi_{\text{lensing}}^2$	$9.9 (\nu: 1.1)$
$c_{217}$	$0.9960^{+0.0028}_{-0.0028}$	$100\theta_*$	$1.04127^{+0.00088}_{-0.00085}$	$\chi_{\text{WMAPTEB}}^2$	$19735.5 (\nu: 2.4)$
$H_0$	$67.9^{+1.4}_{-1.4}$	$D_A/\text{Gpc}$	$13.923^{+0.071}_{-0.070}$	$\chi_{\text{plik}}^2$	$779.4 (\nu: 30.5)$
$\Omega_\Lambda$	$0.694^{+0.018}_{-0.019}$	$z_{\text{drag}}$	$1059.56^{+0.87}_{-0.88}$	$\chi_{\text{prior}}^2$	$7.4 (\nu: 6.5)$
$\Omega_m$	$0.306^{+0.019}_{-0.018}$	$r_{\text{drag}}$	$147.68^{+0.77}_{-0.75}$	$\chi_{\text{CMB}}^2$	$20524.8 (\nu: 31.8)$
$\Omega_m h^2$	$0.1411^{+0.0030}_{-0.0029}$	$k_D$	$0.14016^{+0.00089}_{-0.00089}$		

$$\bar{\chi}_{\text{eff}}^2 = 20532.21; R - 1 = 0.03993$$

### 20.39 base\_r\_plikHM\_TT\_WMAPTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02225^{+0.00039}_{-0.00038}$	$\sigma_8$	$0.824^{+0.020}_{-0.019}$	$k_{\text{eq}}$	$0.01031^{+0.00018}_{-0.00018}$
$\Omega_c h^2$	$0.1190^{+0.0025}_{-0.0025}$	$\sigma_8 \Omega_m^{0.5}$	$0.459^{+0.017}_{-0.017}$	$100\theta_{\text{eq}}$	$0.818^{+0.011}_{-0.011}$
$100\theta_{\text{MC}}$	$1.04097^{+0.00083}_{-0.00084}$	$\sigma_8 \Omega_m^{0.25}$	$0.615^{+0.018}_{-0.017}$	$100\theta_{\text{s,eq}}$	$0.4518^{+0.0056}_{-0.0055}$
$\tau$	$0.074^{+0.023}_{-0.022}$	$\sigma_8/h^{0.5}$	$1.003^{+0.027}_{-0.026}$	$r_{\text{drag}}/D_V(0.57)$	$0.07165^{+0.00083}_{-0.00081}$
$\ln(10^{10} A_s)$	$3.081^{+0.045}_{-0.044}$	$\langle d^2 \rangle^{1/2}$	$2.477^{+0.065}_{-0.063}$	$H(0.57)$	$92.99^{+0.54}_{-0.52}$
$n_s$	$0.9674^{+0.0087}_{-0.0086}$	$z_{\text{re}}$	$9.6^{+2.0}_{-1.9}$	$D_A(0.57)$	$1388^{+15}_{-15}$
$r$	$< 0.0992$	$10^9 A_s$	$2.18^{+0.10}_{-0.094}$	$F_{\text{AP}}(0.57)$	$0.6758^{+0.0038}_{-0.0037}$
$y_{\text{cal}}$	$1.0004^{+0.0048}_{-0.0048}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.023}_{-0.022}$	$f\sigma_8(0.57)$	$0.479^{+0.013}_{-0.013}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$D_{40}$	$1243^{+33}_{-32}$	$\sigma_8(0.57)$	$0.613^{+0.014}_{-0.014}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5716^{+80}_{-77}$	$r_{0.002}$	$< 0.0937$
$A_{143}^{\text{tSZ}}$	$5.2^{+3.7}_{-3.8}$	$D_{810}$	$2534^{+26}_{-27}$	$r_{0.01}$	$< 0.0965$
$A_{100}^{\text{PS}}$	$257^{+50}_{-50}$	$D_{1420}$	$815.1^{+9.4}_{-9.8}$	$\ln(10^{10} A_t)$	$-0.7^{+2.1}_{-2.5}$
$A_{143}^{\text{PS}}$	$44^{+10}_{-20}$	$D_{2000}$	$230.4^{+3.4}_{-3.5}$	$r_{10}$	$< 0.0473$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$n_{\text{s},0.002}$	$0.9674^{+0.0087}_{-0.0086}$	$10^9 A_t$	$< 0.216$
$A_{217}^{\text{PS}}$	$97^{+20}_{-20}$	$Y_{\text{P}}$	$0.24534^{+0.00018}_{-0.00017}$	$10^9 A_t e^{-2\tau}$	$< 0.186$
$A^{\text{kSZ}}$	$< 8.18$	$Y_{\text{P}}^{\text{BBN}}$	$0.24666^{+0.00018}_{-0.00017}$	$f_{2000}^{143}$	$30^{+5}_{-5}$
$A_{100}^{\text{dustTT}}$	$7.4^{+3.7}_{-3.7}$	$10^5 \text{D/H}$	$2.615^{+0.073}_{-0.074}$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	$9.0^{+3.6}_{-3.6}$	$\text{Age/Gyr}$	$13.804^{+0.056}_{-0.056}$	$f_{2000}^{217}$	$106.0^{+3.8}_{-3.8}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.2^{+8.2}_{-8.2}$	$z_*$	$1089.99^{+0.59}_{-0.58}$	$\chi_{\text{WMAPTEB}}^2$	$19736.5 (\nu: 3.7)$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$r_*$	$144.77^{+0.63}_{-0.64}$	$\chi_{\text{plik}}^2$	$777.6 (\nu: 27.3)$
$c_{100}$	$0.9979^{+0.0016}_{-0.0015}$	$100\theta_*$	$1.04117^{+0.00081}_{-0.00082}$	$\chi_{6\text{DF}}^2$	$0.064 (\nu: 0.0)$
$c_{217}$	$0.9960^{+0.0028}_{-0.0028}$	$D_A/\text{Gpc}$	$13.905^{+0.062}_{-0.062}$	$\chi_{\text{MGS}}^2$	$1.32 (\nu: 0.1)$
$H_0$	$67.6^{+1.1}_{-1.1}$	$z_{\text{drag}}$	$1059.58^{+0.89}_{-0.86}$	$\chi_{\text{DR11CMass}}^2$	$2.90 (\nu: 0.2)$
$\Omega_\Lambda$	$0.689^{+0.014}_{-0.015}$	$r_{\text{drag}}$	$147.48^{+0.70}_{-0.69}$	$\chi_{\text{DR11LOWZ}}^2$	$0.77 (\nu: 0.2)$
$\Omega_m$	$0.311^{+0.015}_{-0.014}$	$k_{\text{D}}$	$0.14036^{+0.00088}_{-0.00087}$	$\chi_{\text{prior}}^2$	$7.4 (\nu: 6.4)$
$\Omega_m h^2$	$0.1419^{+0.0024}_{-0.0024}$	$100\theta_{\text{D}}$	$0.16097^{+0.00050}_{-0.00051}$	$\chi_{\text{CMB}}^2$	$20514.1 (\nu: 28.5)$
$\Omega_m h^3$	$0.09596^{+0.00089}_{-0.00090}$	$z_{\text{eq}}$	$3376^{+58}_{-57}$	$\chi_{\text{BAO}}^2$	$5.1 (\nu: 0.5)$

$$\bar{\chi}_{\text{eff}}^2 = 20526.53; R - 1 = 0.01956$$

## 21 w

### 21.1 base\_w\_plikHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022334	$0.02228^{+0.00047}_{-0.00045}$	$\Omega_m$	0.142	$0.205^{+0.12}_{-0.084}$	$D_A/\text{Gpc}$	13.897	$13.891^{+0.089}_{-0.089}$
$\Omega_c h^2$	0.11911	$0.1195^{+0.0043}_{-0.0043}$	$\Omega_m h^2$	0.14209	$0.1425^{+0.0041}_{-0.0040}$	$z_{\text{drag}}$	1059.78	$1059.69^{+0.98}_{-0.92}$
$100\theta_{\text{MC}}$	1.04097	$1.04092^{+0.00097}_{-0.00092}$	$\Omega_m h^3$	0.1421	$0.122^{+0.024}_{-0.029}$	$r_{\text{drag}}$	147.37	$147.32^{+0.96}_{-0.96}$
$\tau$	0.0778	$0.076^{+0.038}_{-0.038}$	$\sigma_8$	1.093	$0.98^{+0.14}_{-0.17}$	$k_D$	0.14055	$0.1406^{+0.0010}_{-0.0010}$
$w$	-1.94	$-1.54^{+0.62}_{-0.50}$	$\sigma_8 \Omega_m^{0.5}$	0.4119	$0.436^{+0.042}_{-0.038}$	$100\theta_D$	0.16084	$0.16091^{+0.00054}_{-0.00054}$
$\ln(10^{10} A_s)$	3.088	$3.085^{+0.072}_{-0.073}$	$\sigma_8 \Omega_m^{0.25}$	0.6708	$0.652^{+0.041}_{-0.046}$	$z_{\text{eq}}$	3380	$3389^{+97}_{-97}$
$n_s$	0.9674	$0.966^{+0.012}_{-0.012}$	$\sigma_8/h^{0.5}$	1.093	$1.062^{+0.063}_{-0.072}$	$k_{\text{eq}}$	0.010316	$0.01034^{+0.00030}_{-0.00030}$
$y_{\text{cal}}$	1.00011	$1.0004^{+0.0049}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.573	$2.55^{+0.10}_{-0.11}$	$100\theta_{\text{eq}}$	0.8172	$0.816^{+0.019}_{-0.018}$
$A_{217}^{\text{CIB}}$	65.4	$63^{+10}_{-10}$	$z_{\text{re}}$	9.86	$9.6^{+3.5}_{-3.6}$	$100\theta_{s,\text{eq}}$	0.4515	$0.4506^{+0.0096}_{-0.0093}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.16	—	$10^9 A_s$	2.194	$2.19^{+0.16}_{-0.16}$	$r_{\text{drag}}/D_V(0.57)$	0.07623	$0.0745^{+0.0033}_{-0.0039}$
$A_{143}^{\text{tSZ}}$	7.03	$5.2^{+3.6}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8777	$1.880^{+0.028}_{-0.026}$	$H(0.57)$	88.99	$90.9^{+2.6}_{-2.7}$
$A_{100}^{\text{PS}}$	250	$256^{+50}_{-50}$	$D_{40}$	1227.1	$1233^{+30}_{-28}$	$D_A(0.57)$	1235	$1294^{+110}_{-82}$
$A_{143}^{\text{PS}}$	40.1	$43^{+20}_{-20}$	$D_{220}$	5722	$5722^{+80}_{-78}$	$F_{\text{AP}}(0.57)$	0.576	$0.616^{+0.068}_{-0.050}$
$A_{143 \times 217}^{\text{PS}}$	36.4	$39^{+20}_{-20}$	$D_{810}$	2532.4	$2534^{+28}_{-26}$	$f\sigma_8(0.57)$	0.690	$0.60^{+0.11}_{-0.14}$
$A_{217}^{\text{PS}}$	99.1	$98^{+20}_{-20}$	$D_{1420}$	814.5	$814^{+10}_{-10}$	$\sigma_8(0.57)$	0.837	$0.74^{+0.12}_{-0.15}$
$A^{\text{kSZ}}$	0.00	$< 7.96$	$D_{2000}$	230.88	$230.6^{+3.7}_{-3.5}$	$f_{2000}^{143}$	28.8	$29^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.39	$7.5^{+3.7}_{-3.7}$	$n_{s,0.002}$	0.9674	$0.966^{+0.012}_{-0.012}$	$f_{2000}^{143 \times 217}$	31.60	$32^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	8.94	$9.0^{+3.6}_{-3.6}$	$Y_P$	0.245377	$0.24535^{+0.00021}_{-0.00021}$	$f_{2000}^{217}$	105.19	$105.7^{+4.0}_{-3.9}$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.0^{+8.1}_{-8.2}$	$Y_P^{\text{BBN}}$	0.246703	$0.24668^{+0.00021}_{-0.00021}$	$\chi_{\text{lowTEB}}^2$	10495.14	$10496.4 (\nu: 2.1)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	2.598	$2.609^{+0.088}_{-0.088}$	$\chi_{\text{plik}}^2$	761.9	$776.1 (\nu: 15.0)$
$c_{100}$	0.99794	$0.9979^{+0.0015}_{-0.0015}$	$\text{Age}/\text{Gyr}$	13.432	$13.57^{+0.28}_{-0.21}$	$\chi_{\text{prior}}^2$	1.9	$7.2 (\nu: 6.0)$
$c_{217}$	0.99581	$0.9959^{+0.0028}_{-0.0028}$	$z_*$	1089.89	$1090.00^{+0.84}_{-0.86}$	$\chi_{\text{CMB}}^2$	11257.0	$11272.6 (\nu: 15.5)$
$H_0$	99.99	$> 66.6$	$r_*$	144.69	$144.62^{+0.97}_{-0.96}$			
$\Omega_\Lambda$	0.858	$0.795^{+0.084}_{-0.12}$	$100\theta_*$	1.04116	$1.04111^{+0.00095}_{-0.00091}$			

Best-fit  $\chi_{\text{eff}}^2 = 11258.91$ ;  $\bar{\chi}_{\text{eff}}^2 = 11279.77$ ;  $R - 1 = 0.01604$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.14 plik\_dx11dr2\_HM\_v18\_TT: 761.92

## 21.2 base\_w\_plikHM\_TT\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022254	$0.02223^{+0.00047}_{-0.00043}$	$\Omega_m$	0.3054	$0.306^{+0.032}_{-0.032}$	$D_A/\text{Gpc}$	13.891	$13.891^{+0.088}_{-0.089}$
$\Omega_c h^2$	0.11962	$0.1197^{+0.0044}_{-0.0046}$	$\Omega_m h^2$	0.14252	$0.1426^{+0.0040}_{-0.0041}$	$z_{\text{drag}}$	1059.63	$1059.59^{+0.95}_{-0.95}$
$100\theta_{\text{MC}}$	1.04088	$1.04089^{+0.00094}_{-0.00091}$	$\Omega_m h^3$	0.09737	$0.0974^{+0.0046}_{-0.0049}$	$r_{\text{drag}}$	147.32	$147.33^{+0.90}_{-0.95}$
$\tau$	0.0788	$0.078^{+0.038}_{-0.037}$	$\sigma_8$	0.8395	$0.838^{+0.041}_{-0.042}$	$k_D$	0.14054	$0.14051^{+0.00099}_{-0.0010}$
$w$	-1.032	$-1.03^{+0.11}_{-0.11}$	$\sigma_8 \Omega_m^{0.5}$	0.4639	$0.464^{+0.025}_{-0.024}$	$100\theta_D$	0.16092	$0.16096^{+0.00054}_{-0.00055}$
$\ln(10^{10} A_s)$	3.092	$3.090^{+0.071}_{-0.069}$	$\sigma_8 \Omega_m^{0.25}$	0.6241	$0.623^{+0.027}_{-0.026}$	$z_{\text{eq}}$	3390	$3391^{+95}_{-99}$
$n_s$	0.9665	$0.966^{+0.012}_{-0.012}$	$\sigma_8/h^{0.5}$	1.0157	$1.015^{+0.041}_{-0.040}$	$k_{\text{eq}}$	0.010348	$0.01035^{+0.00029}_{-0.00030}$
$y_{\text{cal}}$	1.00048	$1.0001^{+0.0046}_{-0.0050}$	$\langle d^2 \rangle^{1/2}$	2.503	$2.502^{+0.093}_{-0.088}$	$100\theta_{\text{eq}}$	0.8150	$0.815^{+0.020}_{-0.019}$
$A_{217}^{\text{CIB}}$	65.8	$64^{+10}_{-10}$	$z_{\text{re}}$	10.05	$9.9^{+3.4}_{-3.6}$	$100\theta_{s,\text{eq}}$	0.4504	$0.450^{+0.010}_{-0.0096}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.13	—	$10^9 A_s$	2.202	$2.20^{+0.16}_{-0.16}$	$r_{\text{drag}}/D_V(0.57)$	0.07169	$0.0717^{+0.0015}_{-0.0014}$
$A_{143}^{\text{tSZ}}$	7.02	$5.3^{+3.7}_{-3.9}$	$10^9 A_s e^{-2\tau}$	1.8806	$1.879^{+0.027}_{-0.027}$	$H(0.57)$	92.87	$92.84^{+0.94}_{-0.89}$
$A_{100}^{\text{PS}}$	252	$256^{+50}_{-50}$	$D_{40}$	1234.7	$1236^{+28}_{-25}$	$D_A(0.57)$	1383.2	$1384^{+28}_{-30}$
$A_{143}^{\text{PS}}$	40.7	$43^{+20}_{-10}$	$D_{220}$	5718	$5713^{+89}_{-86}$	$F_{\text{AP}}(0.57)$	0.6727	$0.673^{+0.013}_{-0.013}$
$A_{143 \times 217}^{\text{PS}}$	36.4	$39^{+20}_{-20}$	$D_{810}$	2535.6	$2532^{+27}_{-29}$	$f\sigma_8(0.57)$	0.4899	$0.489^{+0.029}_{-0.031}$
$A_{217}^{\text{PS}}$	99.4	$98^{+20}_{-20}$	$D_{1420}$	815.4	$814^{+10}_{-10}$	$\sigma_8(0.57)$	0.6249	$0.624^{+0.032}_{-0.034}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.72	$230.2^{+3.8}_{-3.4}$	$f_{2000}^{143}$	29.3	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.46	$7.5^{+3.7}_{-3.5}$	$n_{s,0.002}$	0.9665	$0.966^{+0.012}_{-0.012}$	$f_{2000}^{143 \times 217}$	32.06	$32^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.00	$9.0^{+3.8}_{-4.0}$	$Y_P$	0.245342	$0.24533^{+0.00021}_{-0.00021}$	$f_{2000}^{217}$	105.70	$105.9^{+3.7}_{-3.9}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.1^{+8.0}_{-8.6}$	$Y_P^{\text{BBN}}$	0.246668	$0.24666^{+0.00021}_{-0.00020}$	$\chi_{\text{lowTEB}}^2$	10496.31	$10497.4 (\nu: 2.8)$
$A_{217}^{\text{dustTT}}$	82.3	$82^{+10}_{-20}$	$10^5 \text{D}/\text{H}$	2.613	$2.618^{+0.084}_{-0.089}$	$\chi_{\text{plik}}^2$	763.4	$780 (\nu: 418.0)$
$c_{100}$	0.99792	$0.9979^{+0.0016}_{-0.0016}$	$\text{Age}/\text{Gyr}$	13.790	$13.793^{+0.086}_{-0.086}$	$\chi_{\text{JLA}}^2$	706.69	$707.7 (\nu: 1.0)$
$c_{217}$	0.99590	$0.9958^{+0.0030}_{-0.0029}$	$z_*$	1090.04	$1090.07^{+0.83}_{-0.85}$	$\chi_{\text{prior}}^2$	1.9	$7.6 (\nu: 10.2)$
$H_0$	68.32	$68.3^{+3.3}_{-3.1}$	$r_*$	144.62	$144.62^{+0.95}_{-0.94}$	$\chi_{\text{CMB}}^2$	11259.8	$11280 (\nu: 429.2)$
$\Omega_\Lambda$	0.6946	$0.694^{+0.032}_{-0.032}$	$100\theta_*$	1.04107	$1.04109^{+0.00092}_{-0.00090}$			

Best-fit  $\chi_{\text{eff}}^2 = 11968.38$ ;  $\bar{\chi}_{\text{eff}}^2 = 11992.28$ ;  $R - 1 = 0.08168$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.31 plik\_dx11dr2\_HM\_v18\_TT: 763.44 SN - JLA December\_2013: 706.68

### 21.3 base\_w\_plikHM\_TT\_lowTEB\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022332	$0.02229^{+0.00047}_{-0.00045}$	$\Omega_m$	0.152	$0.22^{+0.15}_{-0.10}$	$D_A/\text{Gpc}$	13.930	$13.919^{+0.085}_{-0.080}$
$\Omega_c h^2$	0.11767	$0.1183^{+0.0038}_{-0.0040}$	$\Omega_m h^2$	0.14065	$0.1412^{+0.0037}_{-0.0037}$	$z_{\text{drag}}$	1059.67	$1059.6^{+1.0}_{-0.93}$
$100\theta_{\text{MC}}$	1.04117	$1.04110^{+0.00097}_{-0.00098}$	$\Omega_m h^3$	0.1354	$0.116^{+0.027}_{-0.030}$	$r_{\text{drag}}$	147.75	$147.64^{+0.86}_{-0.86}$
$\tau$	0.0575	$0.059^{+0.036}_{-0.034}$	$\sigma_8$	1.031	$0.92^{+0.15}_{-0.17}$	$k_D$	0.14014	$0.14022^{+0.00091}_{-0.00091}$
$w$	-1.80	$-1.41^{+0.64}_{-0.56}$	$\sigma_8 \Omega_m^{0.5}$	0.4013	$0.427^{+0.044}_{-0.038}$	$100\theta_D$	0.16092	$0.16096^{+0.00053}_{-0.00057}$
$\ln(10^{10} A_s)$	3.043	$3.049^{+0.066}_{-0.064}$	$\sigma_8 \Omega_m^{0.25}$	0.6431	$0.626^{+0.032}_{-0.035}$	$z_{\text{eq}}$	3346	$3360^{+88}_{-89}$
$n_s$	0.9698	$0.968^{+0.012}_{-0.011}$	$\sigma_8/h^{0.5}$	1.050	$1.022^{+0.050}_{-0.056}$	$k_{\text{eq}}$	0.010211	$0.01025^{+0.00027}_{-0.00027}$
$y_{\text{cal}}$	0.99988	$1.0001^{+0.0050}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.490	$2.471^{+0.060}_{-0.065}$	$100\theta_{\text{eq}}$	0.8237	$0.821^{+0.018}_{-0.016}$
$A_{217}^{\text{CIB}}$	67.5	$64^{+10}_{-10}$	$z_{\text{re}}$	7.91	$8.1^{+3.4}_{-3.6}$	$100\theta_{s,\text{eq}}$	0.4548	$0.4535^{+0.0089}_{-0.0085}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.097	$2.11^{+0.14}_{-0.13}$	$r_{\text{drag}}/D_V(0.57)$	0.07659	$0.0743^{+0.0037}_{-0.0047}$
$A_{143}^{\text{tSZ}}$	7.16	$5.2^{+3.7}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8695	$1.873^{+0.024}_{-0.026}$	$H(0.57)$	90.02	$91.6^{+2.2}_{-2.6}$
$A_{100}^{\text{PS}}$	254	$259^{+50}_{-50}$	$D_{40}$	1213.1	$1221^{+26}_{-25}$	$D_A(0.57)$	1239	$1308^{+130}_{-100}$
$A_{143}^{\text{PS}}$	38.8	$44^{+10}_{-20}$	$D_{220}$	5720	$5720^{+81}_{-80}$	$F_{\text{AP}}(0.57)$	0.584	$0.628^{+0.075}_{-0.060}$
$A_{143 \times 217}^{\text{PS}}$	32	$39^{+20}_{-20}$	$D_{810}$	2530.1	$2531^{+28}_{-27}$	$f\sigma_8(0.57)$	0.640	$0.56^{+0.12}_{-0.13}$
$A_{217}^{\text{PS}}$	96.5	$96^{+20}_{-20}$	$D_{1420}$	814.5	$814^{+10}_{-10}$	$\sigma_8(0.57)$	0.790	$0.70^{+0.12}_{-0.14}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.28	$230.1^{+3.7}_{-3.8}$	$f_{2000}^{143}$	29.8	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.43	$7.5^{+3.5}_{-3.8}$	$n_{s,0.002}$	0.9698	$0.968^{+0.012}_{-0.011}$	$f_{2000}^{143 \times 217}$	32.35	$33^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.16	$9.1^{+3.6}_{-3.6}$	$Y_P$	0.245376	$0.24535^{+0.00021}_{-0.00020}$	$f_{2000}^{217}$	105.86	$106.3^{+3.9}_{-3.9}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.1^{+8.5}_{-8.2}$	$Y_P^{\text{BBN}}$	0.246703	$0.24668^{+0.00021}_{-0.00021}$	$\chi^2_{\text{lensing}}$	9.50	10.1 ( $\nu$ : 1.6)
$A_{217}^{\text{dustTT}}$	81.8	$81^{+10}_{-10}$	$10^5 \text{D}/\text{H}$	2.598	$2.608^{+0.087}_{-0.088}$	$\chi^2_{\text{lowTEB}}$	10493.77	10495.1 ( $\nu$ : 1.0)
$c_{100}$	0.99793	$0.9979^{+0.0016}_{-0.0015}$	Age/Gyr	13.445	$13.61^{+0.35}_{-0.25}$	$\chi^2_{\text{plik}}$	766.0	780 ( $\nu$ : 61.0)
$c_{217}$	0.99597	$0.9959^{+0.0029}_{-0.0029}$	$z_*$	1089.76	$1089.88^{+0.78}_{-0.83}$	$\chi^2_{\text{prior}}$	2.0	7.5 ( $\nu$ : 7.2)
$H_0$	96.3	> 62.5	$r_*$	145.07	$144.94^{+0.93}_{-0.86}$	$\chi^2_{\text{CMB}}$	11269.3	11280 ( $\nu$ : 61.6)
$\Omega_\Lambda$	0.848	$0.78^{+0.10}_{-0.15}$	$100\theta_*$	1.04137	$1.04129^{+0.00094}_{-0.00096}$			

Best-fit  $\chi^2_{\text{eff}} = 11271.28$ ;  $\bar{\chi}^2_{\text{eff}} = 11292.49$ ;  $R - 1 = 0.04349$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.50 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10493.77 plik\_dx11dr2\_HM\_v18.TT: 766.00

## 21.4 base\_w\_plikHM\_TT\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022258	$0.02223^{+0.00046}_{-0.00044}$	$\Omega_m$	0.276	$0.279^{+0.055}_{-0.053}$	$D_A/\text{Gpc}$	13.889	$13.887^{+0.090}_{-0.093}$
$\Omega_c h^2$	0.11968	$0.1199^{+0.0043}_{-0.0044}$	$\Omega_m h^2$	0.14259	$0.1428^{+0.0041}_{-0.0041}$	$z_{\text{drag}}$	1059.67	$1059.59^{+0.95}_{-0.95}$
$100\theta_{\text{MC}}$	1.04088	$1.04087^{+0.00095}_{-0.00095}$	$\Omega_m h^3$	0.1025	$0.103^{+0.010}_{-0.0098}$	$r_{\text{drag}}$	147.30	$147.28^{+0.94}_{-1.0}$
$\tau$	0.0775	$0.076^{+0.037}_{-0.038}$	$\sigma_8$	0.872	$0.871^{+0.070}_{-0.071}$	$k_D$	0.14056	$0.1406^{+0.0010}_{-0.0010}$
$w$	-1.148	$-1.15^{+0.22}_{-0.23}$	$\sigma_8 \Omega_m^{0.5}$	0.4582	$0.459^{+0.027}_{-0.026}$	$100\theta_D$	0.16092	$0.16096^{+0.00053}_{-0.00055}$
$\ln(10^{10} A_s)$	3.089	$3.086^{+0.070}_{-0.072}$	$\sigma_8 \Omega_m^{0.25}$	0.6321	$0.632^{+0.033}_{-0.032}$	$z_{\text{eq}}$	3392	$3396^{+98}_{-98}$
$n_s$	0.9663	$0.965^{+0.012}_{-0.012}$	$\sigma_8/h^{0.5}$	1.0287	$1.028^{+0.048}_{-0.047}$	$k_{\text{eq}}$	0.010353	$0.01037^{+0.00030}_{-0.00030}$
$y_{\text{cal}}$	1.00026	$1.0002^{+0.0048}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	2.518	$2.518^{+0.098}_{-0.097}$	$100\theta_{\text{eq}}$	0.8148	$0.814^{+0.019}_{-0.018}$
$A_{217}^{\text{CIB}}$	65.3	$64^{+10}_{-10}$	$z_{\text{re}}$	9.92	$9.7^{+3.5}_{-3.6}$	$100\theta_{s,\text{eq}}$	0.4502	$0.4499^{+0.0096}_{-0.0092}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.22	—	$10^9 A_s$	2.196	$2.19^{+0.16}_{-0.15}$	$r_{\text{drag}}/D_V(0.57)$	0.07251	$0.0724^{+0.0019}_{-0.0018}$
$A_{143}^{\text{tSZ}}$	6.96	$5.1^{+3.6}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8804	$1.881^{+0.028}_{-0.026}$	$H(0.57)$	92.62	$92.5^{+1.1}_{-1.3}$
$A_{100}^{\text{PS}}$	251	$258^{+50}_{-60}$	$D_{40}$	1233.1	$1236^{+28}_{-26}$	$D_A(0.57)$	1357.6	$1360^{+51}_{-45}$
$A_{143}^{\text{PS}}$	42.1	$44^{+10}_{-10}$	$D_{220}$	5717	$5716^{+82}_{-81}$	$F_{\text{AP}}(0.57)$	0.6585	$0.659^{+0.027}_{-0.025}$
$A_{143 \times 217}^{\text{PS}}$	39.1	$39^{+20}_{-20}$	$D_{810}$	2534.6	$2533^{+27}_{-27}$	$f\sigma_8(0.57)$	0.514	$0.514^{+0.054}_{-0.051}$
$A_{217}^{\text{PS}}$	100.4	$98^{+20}_{-20}$	$D_{1420}$	815.0	$814^{+10}_{-10}$	$\sigma_8(0.57)$	0.652	$0.651^{+0.055}_{-0.056}$
$A^{\text{kSZ}}$	0.01	< 8.24	$D_{2000}$	230.67	$230.3^{+3.7}_{-3.5}$	$f_{2000}^{143}$	29.2	$30^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.37	$7.4^{+3.7}_{-3.5}$	$n_{s,0.002}$	0.9663	$0.965^{+0.012}_{-0.012}$	$f_{2000}^{143 \times 217}$	32.05	$32^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.00	$9.0^{+3.7}_{-3.7}$	$Y_P$	0.245343	$0.24533^{+0.00021}_{-0.00020}$	$f_{2000}^{217}$	105.61	$106.0^{+3.9}_{-3.9}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.1^{+8.3}_{-8.3}$	$Y_P^{\text{BBN}}$	0.246670	$0.24665^{+0.00021}_{-0.00020}$	$\chi_{\text{lowTEB}}^2$	10495.99	10497.1 ( $\nu$ : 2.6)
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-20}$	$10^5 \text{D}/\text{H}$	2.612	$2.619^{+0.086}_{-0.087}$	$\chi_{\text{plik}}^2$	763.2	778 ( $\nu$ : 133.0)
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.724	$13.73^{+0.13}_{-0.13}$	$\chi_{\text{H070p6}}^2$	0.09	0.99 ( $\nu$ : 1.0)
$c_{217}$	0.99584	$0.9959^{+0.0029}_{-0.0029}$	$z_*$	1090.04	$1090.10^{+0.84}_{-0.88}$	$\chi_{\text{prior}}^2$	1.8	7.3 ( $\nu$ : 7.5)
$H_0$	71.9	$71.8^{+6.7}_{-6.5}$	$r_*$	144.60	$144.57^{+0.98}_{-1.0}$	$\chi_{\text{CMB}}^2$	11259.1	11270 ( $\nu$ : 138.1)
$\Omega_\Lambda$	0.724	$0.721^{+0.053}_{-0.055}$	$100\theta_*$	1.04107	$1.04107^{+0.00094}_{-0.00092}$			

Best-fit  $\chi_{\text{eff}}^2 = 11261.07$ ;  $\bar{\chi}_{\text{eff}}^2 = 11283.02$ ;  $R - 1 = 0.03023$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.99 plik\_dx11dr2\_HM\_v18\_TT: 763.16 Hubble - H070p6: 0.09

## 21.5 base\_w\_plikHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02228^{+0.00046}_{-0.00045}$	$\Omega_m$	$0.207^{+0.12}_{-0.085}$	$D_A/\text{Gpc}$	$13.893^{+0.089}_{-0.089}$
$\Omega_c h^2$	$0.1195^{+0.0042}_{-0.0042}$	$\Omega_m h^2$	$0.1424^{+0.0040}_{-0.0040}$	$z_{\text{drag}}$	$1059.70^{+0.96}_{-0.94}$
$100\theta_{\text{MC}}$	$1.04094^{+0.00097}_{-0.00092}$	$\Omega_m h^3$	$0.121^{+0.024}_{-0.029}$	$r_{\text{drag}}$	$147.33^{+0.95}_{-0.95}$
$\tau$	$0.078^{+0.035}_{-0.034}$	$\sigma_8$	$0.98^{+0.14}_{-0.17}$	$k_D$	$0.1405^{+0.0010}_{-0.0010}$
$w$	$-1.53^{+0.61}_{-0.50}$	$\sigma_8 \Omega_m^{0.5}$	$0.436^{+0.042}_{-0.038}$	$100\theta_D$	$0.16090^{+0.00054}_{-0.00054}$
$\ln(10^{10} A_s)$	$3.089^{+0.067}_{-0.066}$	$\sigma_8 \Omega_m^{0.25}$	$0.652^{+0.041}_{-0.045}$	$z_{\text{eq}}$	$3387^{+96}_{-96}$
$n_s$	$0.966^{+0.012}_{-0.011}$	$\sigma_8/h^{0.5}$	$1.062^{+0.064}_{-0.072}$	$k_{\text{eq}}$	$0.01034^{+0.00029}_{-0.00029}$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	$2.549^{+0.099}_{-0.11}$	$100\theta_{\text{eq}}$	$0.816^{+0.018}_{-0.018}$
$A_{217}^{\text{CIB}}$	$63^{+10}_{-10}$	$z_{\text{re}}$	$9.8^{+2.7}_{-3.3}$	$100\theta_{\text{s,eq}}$	$0.4508^{+0.0095}_{-0.0091}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s$	$2.20^{+0.15}_{-0.14}$	$r_{\text{drag}}/D_V(0.57)$	$0.0745^{+0.0032}_{-0.0039}$
$A_{143}^{\text{tSZ}}$	$5.2^{+3.6}_{-3.8}$	$10^9 A_s e^{-2\tau}$	$1.879^{+0.027}_{-0.027}$	$H(0.57)$	$91.0^{+2.5}_{-2.6}$
$A_{100}^{\text{PS}}$	$256^{+50}_{-50}$	$D_{40}$	$1232^{+30}_{-28}$	$D_A(0.57)$	$1295^{+110}_{-83}$
$A_{143}^{\text{PS}}$	$43^{+20}_{-20}$	$D_{220}$	$5722^{+81}_{-80}$	$F_{\text{AP}}(0.57)$	$0.617^{+0.068}_{-0.050}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$D_{810}$	$2533^{+27}_{-27}$	$f\sigma_8(0.57)$	$0.60^{+0.12}_{-0.14}$
$A_{217}^{\text{PS}}$	$98^{+20}_{-20}$	$D_{1420}$	$814.3^{+9.8}_{-9.6}$	$\sigma_8(0.57)$	$0.74^{+0.12}_{-0.15}$
$A^{\text{kSZ}}$	$< 8.08$	$D_{2000}$	$230.6^{+3.7}_{-3.5}$	$f_{2000}^{143}$	$29^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	$7.4^{+3.7}_{-3.6}$	$n_{\text{s},0.002}$	$0.966^{+0.012}_{-0.011}$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	$9.0^{+3.7}_{-3.6}$	$Y_{\text{P}}$	$0.24535^{+0.00021}_{-0.00020}$	$f_{2000}^{217}$	$105.7^{+3.9}_{-3.9}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.0^{+8.2}_{-8.1}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24668^{+0.00021}_{-0.00021}$	$\chi^2_{\text{lowTEB}}$	$10496.4 (\nu: 2.4)$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$10^5 D/H$	$2.608^{+0.087}_{-0.086}$	$\chi^2_{\text{plik}}$	$776 (\nu: 55.0)$
$c_{100}$	$0.9979^{+0.0016}_{-0.0015}$	$\text{Age}/\text{Gyr}$	$13.57^{+0.28}_{-0.21}$	$\chi^2_{\text{prior}}$	$7.3 (\nu: 6.6)$
$c_{217}$	$0.9959^{+0.0028}_{-0.0029}$	$z_*$	$1089.98^{+0.83}_{-0.85}$	$\chi^2_{\text{CMB}}$	$11270 (\nu: 57.6)$
$H_0$	$> 66.5$	$r_*$	$144.64^{+0.97}_{-0.95}$		
$\Omega_\Lambda$	$0.793^{+0.085}_{-0.12}$	$100\theta_*$	$1.04113^{+0.00095}_{-0.00091}$		

$$\bar{\chi}^2_{\text{eff}} = 11280.10; R - 1 = 0.01069$$



## 21.6 base\_w\_plikHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022303	$0.02229^{+0.00031}_{-0.00031}$	$A_{100 \times 217}^{\text{dustTE}}$	0.304	$0.30^{+0.17}_{-0.16}$	Age/Gyr	13.441	$13.57^{+0.25}_{-0.18}$
$\Omega_c h^2$	0.11947	$0.1196^{+0.0029}_{-0.0029}$	$A_{143}^{\text{dustTE}}$	0.152	$0.15^{+0.11}_{-0.10}$	$z_*$	1089.96	$1089.99^{+0.59}_{-0.57}$
$100\theta_{\text{MC}}$	1.04083	$1.04080^{+0.00062}_{-0.00062}$	$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.16}_{-0.16}$	$r_*$	144.62	$144.60^{+0.63}_{-0.62}$
$\tau$	0.0742	$0.075^{+0.034}_{-0.033}$	$A_{217}^{\text{dustTE}}$	1.66	$1.67^{+0.50}_{-0.51}$	$100\theta_*$	1.04101	$1.04100^{+0.00060}_{-0.00061}$
$w$	-1.95	$-1.55^{+0.58}_{-0.48}$	$c_{100}$	0.99819	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.892	$13.891^{+0.059}_{-0.057}$
$\ln(10^{10} A_s)$	3.082	$3.085^{+0.066}_{-0.063}$	$c_{217}$	0.99585	$0.9959^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.74	$1059.71^{+0.61}_{-0.61}$
$n_s$	0.9654	$0.9649^{+0.0097}_{-0.0093}$	$H_0$	99.9	$> 67.9$	$r_{\text{drag}}$	147.31	$147.30^{+0.62}_{-0.61}$
$y_{\text{cal}}$	0.999996	$1.0003^{+0.0048}_{-0.0050}$	$\Omega_\Lambda$	0.857	$0.797^{+0.079}_{-0.11}$	$k_D$	0.14059	$0.14058^{+0.00064}_{-0.00065}$
$A_{217}^{\text{CIB}}$	65.1	$64^{+10}_{-10}$	$\Omega_m$	0.143	$0.203^{+0.11}_{-0.079}$	$100\theta_D$	0.160852	$0.16087^{+0.00036}_{-0.00036}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.22	—	$\Omega_m h^2$	0.14242	$0.1425^{+0.0027}_{-0.0027}$	$z_{\text{eq}}$	3388	$3390^{+64}_{-64}$
$A_{143}^{\text{tSZ}}$	7.12	$5.4^{+3.6}_{-3.8}$	$\Omega_m h^3$	0.1423	$0.122^{+0.023}_{-0.027}$	$k_{\text{eq}}$	0.010340	$0.01035^{+0.00020}_{-0.00020}$
$A_{100}^{\text{PS}}$	253	$259^{+50}_{-50}$	$\sigma_8$	1.092	$0.98^{+0.14}_{-0.16}$	$100\theta_{\text{eq}}$	0.8156	$0.815^{+0.012}_{-0.012}$
$A_{143}^{\text{PS}}$	41.0	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4123	$0.435^{+0.038}_{-0.033}$	$100\theta_{s,\text{eq}}$	0.4506	$0.4504^{+0.0063}_{-0.0062}$
$A_{143 \times 217}^{\text{PS}}$	38.8	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6709	$0.653^{+0.035}_{-0.038}$	$r_{\text{drag}}/D_V(0.57)$	0.07603	$0.0745^{+0.0027}_{-0.0034}$
$A_{217}^{\text{PS}}$	100.3	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.092	$1.063^{+0.056}_{-0.062}$	$H(0.57)$	88.82	$90.8^{+2.4}_{-2.4}$
$A^{\text{kSZ}}$	0.00	$< 7.68$	$\langle d^2 \rangle^{1/2}$	2.574	$2.551^{+0.085}_{-0.090}$	$D_A(0.57)$	1238	$1293^{+100}_{-75}$
$A_{100}^{\text{dustTT}}$	7.33	$7.4^{+3.6}_{-3.6}$	$z_{\text{re}}$	9.55	$9.6^{+3.1}_{-3.1}$	$F_{\text{AP}}(0.57)$	0.576	$0.615^{+0.064}_{-0.048}$
$A_{143}^{\text{dustTT}}$	8.95	$8.9^{+3.6}_{-3.6}$	$10^9 A_s$	2.181	$2.19^{+0.15}_{-0.14}$	$f\sigma_8(0.57)$	0.691	$0.60^{+0.11}_{-0.13}$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.0^{+8.1}_{-8.2}$	$10^9 A_s e^{-2\tau}$	1.8801	$1.881^{+0.023}_{-0.024}$	$\sigma_8(0.57)$	0.835	$0.74^{+0.11}_{-0.14}$
$A_{217}^{\text{dustTT}}$	81.8	$82^{+10}_{-10}$	$D_{40}$	1231.3	$1236^{+26}_{-26}$	$f_{2000}^{143}$	28.8	$29^{+5}_{-5}$
$A_{100}^{\text{dustEE}}$	0.0814	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5730	$5733^{+75}_{-76}$	$f_{2000}^{143 \times 217}$	31.81	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0489	$0.0488^{+0.0098}_{-0.0098}$	$D_{810}$	2533.2	$2535^{+26}_{-27}$	$f_{2000}^{217}$	105.38	$105.6^{+3.7}_{-3.8}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.0997^{+0.064}_{-0.064}$	$D_{1420}$	814.0	$814.3^{+8.8}_{-9.5}$	$\chi_{\text{lowTEB}}^2$	10495.27	$10496.5 (\nu: 1.8)$
$A_{143}^{\text{dustEE}}$	0.1003	$0.100^{+0.013}_{-0.014}$	$D_{2000}$	230.55	$230.5^{+3.0}_{-3.2}$	$\chi_{\text{plik}}^2$	2430.1	$2449.4 (\nu: 21.8)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.224^{+0.091}_{-0.091}$	$n_{s,0.002}$	0.9654	$0.9649^{+0.0097}_{-0.0093}$	$\chi_{\text{prior}}^2$	6.9	$19.2 (\nu: 14.7)$
$A_{217}^{\text{dustEE}}$	0.648	$0.65^{+0.26}_{-0.26}$	$Y_P$	0.245363	$0.24535^{+0.00014}_{-0.00015}$	$\chi_{\text{CMB}}^2$	12925.4	$12945.8 (\nu: 22.6)$
$A_{100}^{\text{dustTE}}$	0.142	$0.141^{+0.073}_{-0.075}$	$Y_P^{\text{BBN}}$	0.246690	$0.24668^{+0.00014}_{-0.00015}$			
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.131^{+0.057}_{-0.058}$	$10^5 \text{D}/\text{H}$	2.604	$2.607^{+0.060}_{-0.058}$			

Best-fit  $\chi_{\text{eff}}^2 = 12932.27$ ;  $\bar{\chi}_{\text{eff}}^2 = 12965.06$ ;  $R - 1 = 0.00999$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.27 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2430.09

## 21.7 base\_w\_plikHM\_TTTEEE\_lowTEB\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022298	$0.02228^{+0.00030}_{-0.00030}$	$A_{100 \times 217}^{\text{dustTE}}$	0.305	$0.30^{+0.16}_{-0.16}$	Age/Gyr	13.521	$13.62^{+0.32}_{-0.24}$
$\Omega_c h^2$	0.11884	$0.1190^{+0.0027}_{-0.0029}$	$A_{143}^{\text{dustTE}}$	0.154	$0.16^{+0.10}_{-0.11}$	$z_*$	1089.91	$1089.94^{+0.55}_{-0.54}$
$100\theta_{\text{MC}}$	1.04092	$1.04089^{+0.00060}_{-0.00064}$	$A_{143 \times 217}^{\text{dustTE}}$	0.336	$0.34^{+0.15}_{-0.16}$	$r_*$	144.79	$144.76^{+0.62}_{-0.60}$
$\tau$	0.0529	$0.056^{+0.031}_{-0.029}$	$A_{217}^{\text{dustTE}}$	1.668	$1.66^{+0.48}_{-0.51}$	$100\theta_*$	1.04111	$1.04108^{+0.00059}_{-0.00063}$
$w$	-1.62	$-1.42^{+0.62}_{-0.56}$	$c_{100}$	0.99816	$0.9981^{+0.0016}_{-0.0015}$	$D_A/\text{Gpc}$	13.907	$13.905^{+0.054}_{-0.055}$
$\ln(10^{10} A_s)$	3.037	$3.045^{+0.055}_{-0.056}$	$c_{217}$	0.99602	$0.9960^{+0.0028}_{-0.0027}$	$z_{\text{drag}}$	1059.70	$1059.66^{+0.63}_{-0.61}$
$n_s$	0.9664	$0.9658^{+0.0096}_{-0.0090}$	$H_0$	88.2	$> 63.1$	$r_{\text{drag}}$	147.48	$147.45^{+0.58}_{-0.58}$
$y_{\text{cal}}$	0.99972	$1.0001^{+0.0047}_{-0.0048}$	$\Omega_\Lambda$	0.818	$0.77^{+0.10}_{-0.14}$	$k_D$	0.14040	$0.14042^{+0.00062}_{-0.00061}$
$A_{217}^{\text{CIB}}$	67.8	$65^{+10}_{-10}$	$\Omega_m$	0.182	$0.23^{+0.14}_{-0.10}$	$100\theta_D$	0.160895	$0.16091^{+0.00036}_{-0.00036}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$\Omega_m h^2$	0.14178	$0.1419^{+0.0026}_{-0.0027}$	$z_{\text{eq}}$	3373	$3376^{+62}_{-64}$
$A_{143}^{\text{tSZ}}$	7.26	$5.3^{+3.8}_{-3.8}$	$\Omega_m h^3$	0.1251	$0.116^{+0.027}_{-0.029}$	$k_{\text{eq}}$	0.010294	$0.01030^{+0.00019}_{-0.00020}$
$A_{100}^{\text{PS}}$	258	$263^{+60}_{-50}$	$\sigma_8$	0.978	$0.92^{+0.15}_{-0.17}$	$100\theta_{\text{eq}}$	0.8184	$0.818^{+0.012}_{-0.012}$
$A_{143}^{\text{PS}}$	38.9	$43^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4173	$0.430^{+0.041}_{-0.037}$	$100\theta_{s,\text{eq}}$	0.4521	$0.4518^{+0.0064}_{-0.0059}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6388	$0.629^{+0.028}_{-0.034}$	$r_{\text{drag}}/D_V(0.57)$	0.07532	$0.0740^{+0.0033}_{-0.0043}$
$A_{217}^{\text{PS}}$	96.5	$96^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.041	$1.024^{+0.048}_{-0.057}$	$H(0.57)$	90.77	$91.4^{+2.1}_{-2.5}$
$A^{\text{kSZ}}$	0.00	$< 8.26$	$\langle d^2 \rangle^{1/2}$	2.489	$2.478^{+0.058}_{-0.060}$	$D_A(0.57)$	1272	$1312^{+130}_{-96}$
$A_{100}^{\text{dustTT}}$	7.44	$7.5^{+3.5}_{-3.6}$	$z_{\text{re}}$	7.48	$7.8^{+2.9}_{-3.1}$	$F_{\text{AP}}(0.57)$	0.605	$0.628^{+0.072}_{-0.060}$
$A_{143}^{\text{dustTT}}$	9.05	$9.0^{+3.8}_{-3.6}$	$10^9 A_s$	2.084	$2.10^{+0.12}_{-0.12}$	$f\sigma_8(0.57)$	0.599	$0.56^{+0.12}_{-0.13}$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.2^{+8.1}_{-8.3}$	$10^9 A_s e^{-2\tau}$	1.8749	$1.877^{+0.024}_{-0.021}$	$\sigma_8(0.57)$	0.744	$0.70^{+0.12}_{-0.14}$
$A_{217}^{\text{dustTT}}$	81.5	$82^{+10}_{-10}$	$D_{40}$	1220.8	$1226^{+27}_{-27}$	$f_{2000}^{143}$	29.9	$30^{+5}_{-5}$
$A_{100}^{\text{dustEE}}$	0.0815	$0.082^{+0.011}_{-0.010}$	$D_{220}$	5723	$5727^{+74}_{-75}$	$f_{2000}^{143 \times 217}$	32.53	$33^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0492	$0.049^{+0.010}_{-0.010}$	$D_{810}$	2531.2	$2533^{+27}_{-26}$	$f_{2000}^{217}$	106.00	$106.2^{+3.7}_{-3.8}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.100^{+0.069}_{-0.065}$	$D_{1420}$	814.0	$814.4^{+9.0}_{-9.2}$	$\chi^2_{\text{lensing}}$	10.25	$10.8 (\nu: 2.4)$
$A_{143}^{\text{dustEE}}$	0.1004	$0.100^{+0.013}_{-0.014}$	$D_{2000}$	229.96	$230.0^{+3.1}_{-3.2}$	$\chi^2_{\text{lowTEB}}$	10494.42	$10495.3 (\nu: 0.9)$
$A_{143 \times 217}^{\text{dustEE}}$	0.223	$0.222^{+0.089}_{-0.094}$	$n_{s,0.002}$	0.9664	$0.9658^{+0.0096}_{-0.0090}$	$\chi^2_{\text{plik}}$	2434.4	$2452.6 (\nu: 22.7)$
$A_{217}^{\text{dustEE}}$	0.651	$0.64^{+0.26}_{-0.27}$	$Y_P$	0.245361	$0.24535^{+0.00013}_{-0.00014}$	$\chi^2_{\text{prior}}$	7.1	$19.7 (\nu: 15.9)$
$A_{100}^{\text{dustTE}}$	0.141	$0.140^{+0.073}_{-0.076}$	$Y_P^{\text{BBN}}$	0.246688	$0.24668^{+0.00013}_{-0.00014}$	$\chi^2_{\text{CMB}}$	12939.0	$12958.8 (\nu: 23.2)$
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.131^{+0.060}_{-0.059}$	$10^5 \text{D}/\text{H}$	2.605	$2.608^{+0.058}_{-0.056}$			

Best-fit  $\chi^2_{\text{eff}} = 12946.18$ ;  $\bar{\chi}^2_{\text{eff}} = 12978.43$ ;  $R - 1 = 0.06336$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 10.25 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.42 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2434.37

## 21.8 base\_w\_plikHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022282	$0.02226^{+0.00032}_{-0.00032}$	$A_{100 \times 217}^{\text{dustTE}}$	0.302	$0.31^{+0.17}_{-0.17}$	Age/Gyr	13.721	$13.73^{+0.12}_{-0.12}$
$\Omega_c h^2$	0.11970	$0.1198^{+0.0030}_{-0.0029}$	$A_{143}^{\text{dustTE}}$	0.155	$0.16^{+0.10}_{-0.10}$	$z_*$	1090.01	$1090.05^{+0.60}_{-0.58}$
$100\theta_{\text{MC}}$	1.04078	$1.04077^{+0.00062}_{-0.00061}$	$A_{143 \times 217}^{\text{dustTE}}$	0.339	$0.34^{+0.16}_{-0.16}$	$r_*$	144.58	$144.56^{+0.64}_{-0.66}$
$\tau$	0.0791	$0.077^{+0.033}_{-0.031}$	$A_{217}^{\text{dustTE}}$	1.67	$1.67^{+0.50}_{-0.50}$	$100\theta_*$	1.04097	$1.04097^{+0.00061}_{-0.00060}$
$w$	-1.155	$-1.16^{+0.22}_{-0.21}$	$c_{100}$	0.99822	$0.9982^{+0.0016}_{-0.0016}$	$D_A/\text{Gpc}$	13.888	$13.887^{+0.059}_{-0.061}$
$\ln(10^{10} A_s)$	3.093	$3.089^{+0.061}_{-0.060}$	$c_{217}$	0.99587	$0.9960^{+0.0028}_{-0.0026}$	$z_{\text{drag}}$	1059.70	$1059.66^{+0.63}_{-0.63}$
$n_s$	0.9657	$0.9643^{+0.0091}_{-0.0098}$	$H_0$	72.0	$72.1^{+6.6}_{-6.5}$	$r_{\text{drag}}$	147.27	$147.26^{+0.63}_{-0.64}$
$y_{\text{cal}}$	1.0002	$1.0003^{+0.0049}_{-0.0052}$	$\Omega_\Lambda$	0.725	$0.723^{+0.051}_{-0.055}$	$k_D$	0.14061	$0.14060^{+0.00067}_{-0.00066}$
$A_{217}^{\text{CIB}}$	64.6	$64^{+10}_{-10}$	$\Omega_m$	0.275	$0.277^{+0.055}_{-0.051}$	$100\theta_D$	0.160868	$0.16090^{+0.00038}_{-0.00037}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.31	—	$\Omega_m h^2$	0.14263	$0.1428^{+0.0028}_{-0.0027}$	$z_{\text{eq}}$	3393	$3396^{+66}_{-65}$
$A_{143}^{\text{tSZ}}$	7.04	$5.4^{+3.7}_{-3.7}$	$\Omega_m h^3$	0.1028	$0.1029^{+0.0095}_{-0.0093}$	$k_{\text{eq}}$	0.010356	$0.01036^{+0.00020}_{-0.00020}$
$A_{100}^{\text{PS}}$	253	$259^{+60}_{-50}$	$\sigma_8$	0.875	$0.874^{+0.064}_{-0.065}$	$100\theta_{\text{eq}}$	0.8146	$0.814^{+0.013}_{-0.012}$
$A_{143}^{\text{PS}}$	42.7	$43^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4588	$0.458^{+0.022}_{-0.021}$	$100\theta_{s,\text{eq}}$	0.4501	$0.4499^{+0.0064}_{-0.0063}$
$A_{143 \times 217}^{\text{PS}}$	41.7	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6336	$0.633^{+0.026}_{-0.027}$	$r_{\text{drag}}/D_V(0.57)$	0.07253	$0.0724^{+0.0016}_{-0.0018}$
$A_{217}^{\text{PS}}$	101.3	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0311	$1.029^{+0.040}_{-0.043}$	$H(0.57)$	92.59	$92.50^{+0.87}_{-0.96}$
$A^{\text{kSZ}}$	0.00	$< 8.01$	$\langle d^2 \rangle^{1/2}$	2.525	$2.523^{+0.079}_{-0.082}$	$D_A(0.57)$	1356.5	$1359^{+48}_{-46}$
$A_{100}^{\text{dustTT}}$	7.41	$7.4^{+3.7}_{-3.6}$	$z_{\text{re}}$	10.05	$9.8^{+2.8}_{-3.0}$	$F_{\text{AP}}(0.57)$	0.6578	$0.658^{+0.026}_{-0.024}$
$A_{143}^{\text{dustTT}}$	8.88	$8.9^{+3.6}_{-3.6}$	$10^9 A_s$	2.204	$2.20^{+0.14}_{-0.13}$	$f\sigma_8(0.57)$	0.5159	$0.516^{+0.047}_{-0.047}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.1^{+7.8}_{-8.1}$	$10^9 A_s e^{-2\tau}$	1.8816	$1.882^{+0.026}_{-0.024}$	$\sigma_8(0.57)$	0.655	$0.653^{+0.052}_{-0.054}$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$D_{40}$	1236.2	$1240^{+28}_{-26}$	$f_{2000}^{143}$	28.7	$30^{+5}_{-5}$
$A_{100}^{\text{dustEE}}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5725	$5730^{+79}_{-81}$	$f_{2000}^{143 \times 217}$	31.79	$32.2^{+3.5}_{-3.8}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0489	$0.0488^{+0.0094}_{-0.0099}$	$D_{810}$	2535.5	$2535^{+26}_{-28}$	$f_{2000}^{217}$	105.31	$105.8^{+3.9}_{-3.8}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.098^{+0.062}_{-0.064}$	$D_{1420}$	815.1	$814.3^{+8.9}_{-9.7}$	$\chi_{\text{lowTEB}}^2$	10496.38	10497.1 ( $\nu$ : 1.9)
$A_{143}^{\text{dustEE}}$	0.1002	$0.100^{+0.013}_{-0.014}$	$D_{2000}$	230.75	$230.4^{+3.1}_{-3.2}$	$\chi_{\text{plik}}^2$	2431.3	2450.0 ( $\nu$ : 22.1)
$A_{143 \times 217}^{\text{dustEE}}$	0.225	$0.221^{+0.090}_{-0.089}$	$n_{s,0.002}$	0.9657	$0.9643^{+0.0091}_{-0.0098}$	$\chi_{\text{H070p6}}^2$	0.12	1.0 ( $\nu$ : 1.0)
$A_{217}^{\text{dustEE}}$	0.653	$0.65^{+0.26}_{-0.27}$	$Y_P$	0.245354	$0.24534^{+0.00014}_{-0.00015}$	$\chi_{\text{prior}}^2$	6.7	19.4 ( $\nu$ : 14.9)
$A_{100}^{\text{dustTE}}$	0.143	$0.141^{+0.073}_{-0.075}$	$Y_P^{\text{BBN}}$	0.246680	$0.24667^{+0.00014}_{-0.00015}$	$\chi_{\text{CMB}}^2$	12927.7	12947.2 ( $\nu$ : 22.4)
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.131^{+0.059}_{-0.056}$	$10^5 \text{D}/\text{H}$	2.608	$2.613^{+0.062}_{-0.060}$			

Best-fit  $\chi_{\text{eff}}^2 = 12934.51$ ;  $\bar{\chi}_{\text{eff}}^2 = 12967.62$ ;  $R - 1 = 0.03284$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.38 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.28 Hubble - H070p6: 0.12

## 21.9 base\_w\_plikHM\_TTTEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02229^{+0.00031}_{-0.00031}$	$A_{100 \times 217}^{\text{dustTE}}$	$0.30^{+0.17}_{-0.16}$	Age/Gyr	$13.57^{+0.25}_{-0.18}$
$\Omega_c h^2$	$0.1196^{+0.0028}_{-0.0028}$	$A_{143}^{\text{dustTE}}$	$0.15^{+0.11}_{-0.10}$	$z_*$	$1089.98^{+0.58}_{-0.57}$
$100\theta_{\text{MC}}$	$1.04081^{+0.00062}_{-0.00062}$	$A_{143 \times 217}^{\text{dustTE}}$	$0.34^{+0.16}_{-0.16}$	$r_*$	$144.61^{+0.64}_{-0.61}$
$\tau$	$0.076^{+0.032}_{-0.031}$	$A_{217}^{\text{dustTE}}$	$1.67^{+0.50}_{-0.50}$	$100\theta_*$	$1.04100^{+0.00061}_{-0.00061}$
$w$	$-1.55^{+0.58}_{-0.48}$	$c_{100}$	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	$13.891^{+0.059}_{-0.056}$
$\ln(10^{10} A_s)$	$3.087^{+0.061}_{-0.061}$	$c_{217}$	$0.9959^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	$1059.72^{+0.60}_{-0.61}$
$n_s$	$0.9650^{+0.0096}_{-0.0091}$	$H_0$	$> 67.8$	$r_{\text{drag}}$	$147.30^{+0.62}_{-0.60}$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0050}$	$\Omega_\Lambda$	$0.797^{+0.079}_{-0.11}$	$k_D$	$0.14058^{+0.00064}_{-0.00065}$
$A_{217}^{\text{CIB}}$	$63^{+10}_{-10}$	$\Omega_m$	$0.203^{+0.11}_{-0.079}$	$100\theta_D$	$0.16087^{+0.00037}_{-0.00036}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\Omega_m h^2$	$0.1425^{+0.0027}_{-0.0027}$	$z_{\text{eq}}$	$3390^{+64}_{-64}$
$A_{143}^{\text{tSZ}}$	$5.4^{+3.5}_{-3.8}$	$\Omega_m h^3$	$0.122^{+0.023}_{-0.027}$	$k_{\text{eq}}$	$0.01035^{+0.00019}_{-0.00020}$
$A_{100}^{\text{PS}}$	$259^{+50}_{-50}$	$\sigma_8$	$0.98^{+0.13}_{-0.16}$	$100\theta_{\text{eq}}$	$0.815^{+0.012}_{-0.012}$
$A_{143}^{\text{PS}}$	$43^{+10}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	$0.436^{+0.038}_{-0.033}$	$100\theta_{\text{s,eq}}$	$0.4505^{+0.0063}_{-0.0061}$
$A_{143 \times 217}^{\text{PS}}$	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	$0.653^{+0.035}_{-0.039}$	$r_{\text{drag}}/D_V(0.57)$	$0.0745^{+0.0027}_{-0.0034}$
$A_{217}^{\text{PS}}$	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	$1.063^{+0.056}_{-0.062}$	$H(0.57)$	$90.8^{+2.4}_{-2.4}$
$A^{\text{kSZ}}$	$< 7.60$	$\langle d^2 \rangle^{1/2}$	$2.553^{+0.084}_{-0.087}$	$D_A(0.57)$	$1293^{+100}_{-75}$
$A_{100}^{\text{dustTT}}$	$7.4^{+3.6}_{-3.6}$	$z_{\text{re}}$	$9.7^{+2.7}_{-3.0}$	$F_{\text{AP}}(0.57)$	$0.615^{+0.064}_{-0.048}$
$A_{143}^{\text{dustTT}}$	$8.9^{+3.6}_{-3.6}$	$10^9 A_s$	$2.19^{+0.14}_{-0.13}$	$f\sigma_8(0.57)$	$0.60^{+0.11}_{-0.13}$
$A_{143 \times 217}^{\text{dustTT}}$	$16.9^{+8.0}_{-8.2}$	$10^9 A_s e^{-2\tau}$	$1.881^{+0.023}_{-0.024}$	$\sigma_8(0.57)$	$0.75^{+0.11}_{-0.14}$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$D_{40}$	$1236^{+26}_{-26}$	$f_{2000}^{143}$	$29^{+5}_{-5}$
$A_{100}^{\text{dustEE}}$	$0.081^{+0.011}_{-0.011}$	$D_{220}$	$5732^{+75}_{-76}$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$
$A_{100 \times 143}^{\text{dustEE}}$	$0.0489^{+0.0098}_{-0.0099}$	$D_{810}$	$2534^{+26}_{-27}$	$f_{2000}^{217}$	$105.6^{+3.7}_{-3.7}$
$A_{100 \times 217}^{\text{dustEE}}$	$0.0997^{+0.066}_{-0.065}$	$D_{1420}$	$814.3^{+9.0}_{-9.6}$	$\chi^2_{\text{lowTEB}}$	$10496.5 (\nu: 1.8)$
$A_{143}^{\text{dustEE}}$	$0.100^{+0.013}_{-0.013}$	$D_{2000}$	$230.5^{+3.1}_{-3.2}$	$\chi^2_{\text{plik}}$	$2449.2 (\nu: 21.6)$
$A_{143 \times 217}^{\text{dustEE}}$	$0.223^{+0.091}_{-0.091}$	$n_{\text{s},0.002}$	$0.9650^{+0.0096}_{-0.0091}$	$\chi^2_{\text{prior}}$	$19.3 (\nu: 15.0)$
$A_{217}^{\text{dustEE}}$	$0.65^{+0.26}_{-0.26}$	$Y_{\text{P}}$	$0.24536^{+0.00014}_{-0.00015}$	$\chi^2_{\text{CMB}}$	$12945.7 (\nu: 22.3)$
$A_{100}^{\text{dustTE}}$	$0.140^{+0.074}_{-0.075}$	$Y_{\text{P}}^{\text{BBN}}$	$0.24668^{+0.00014}_{-0.00015}$		
$A_{100 \times 143}^{\text{dustTE}}$	$0.131^{+0.058}_{-0.058}$	$10^5 \text{D/H}$	$2.607^{+0.059}_{-0.058}$		

$$\bar{\chi}^2_{\text{eff}} = 12964.96; R - 1 = 0.01324$$

## 21.10 base\_w\_CamSpecHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022305	$0.02229^{+0.00046}_{-0.00045}$ (+0.0 $\sigma$ )	$\beta_1^1$	-0.07	$-0.1^{+2.0}_{-2.0}$	$r_*$	144.75	$144.71^{+0.93}_{-0.93}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	0.11898	$0.1192^{+0.0042}_{-0.0042}$ (-0.2 $\sigma$ )	$H_0$	99.99	$> 66.2$ (-0.1 $\sigma$ )	$100\theta_*$	1.04119	$1.04118^{+0.00090}_{-0.00089}$ (+0.2 $\sigma$ )
$100\theta_{MC}$	1.04099	$1.04098^{+0.00092}_{-0.00091}$ (+0.1 $\sigma$ )	$\Omega_\Lambda$	0.858	$> 0.674$ (-0.1 $\sigma$ )	$z_{drag}$	1059.70	$1059.67^{+0.91}_{-0.91}$ (-0.0 $\sigma$ )
$\tau$	0.0756	$0.078^{+0.040}_{-0.038}$ (+0.1 $\sigma$ )	$\Omega_m$	0.142	$< 0.326$ (+0.1 $\sigma$ )	$r_{drag}$	147.43	$147.40^{+0.92}_{-0.92}$ (+0.2 $\sigma$ )
$w$	-1.93	$-1.51^{+0.61}_{-0.51}$ (+0.1 $\sigma$ )	$\Omega_m h^2$	0.14193	$0.1421^{+0.0040}_{-0.0039}$ (-0.2 $\sigma$ )	$k_D$	0.14047	$0.14049^{+0.00099}_{-0.00098}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.081	$3.086^{+0.076}_{-0.073}$ (+0.0 $\sigma$ )	$\Omega_m h^3$	0.1419	$0.120^{+0.024}_{-0.028}$ (-0.1 $\sigma$ )	$100\theta_D$	0.16087	$0.16089^{+0.00053}_{-0.00052}$ (-0.0 $\sigma$ )
$n_s$	0.9684	$0.968^{+0.013}_{-0.012}$ (+0.4 $\sigma$ )	$\sigma_8$	1.089	$0.97^{+0.15}_{-0.17}$ (-0.1 $\sigma$ )	$z_{eq}$	3376	$3381^{+95}_{-94}$ (-0.2 $\sigma$ )
$y_{cal}$	0.99992	$1.0002^{+0.0048}_{-0.0049}$ (-0.1 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4103	$0.435^{+0.042}_{-0.038}$ (-0.0 $\sigma$ )	$100\theta_{eq}$	0.8178	$0.817^{+0.018}_{-0.018}$ (+0.2 $\sigma$ )
$A_{100}^{PS}$	244.4	$244^{+40}_{-40}$ (-0.4 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6683	$0.649^{+0.041}_{-0.044}$ (-0.1 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07628	$0.0745^{+0.0033}_{-0.0040}$ (+0.0 $\sigma$ )
$A_{143}^{PS}$	35.1	$38^{+20}_{-20}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	1.089	$1.058^{+0.064}_{-0.070}$ (-0.1 $\sigma$ )	$H(0.57)$	89.00	$91.1^{+2.5}_{-2.6}$ (+0.1 $\sigma$ )
$A_{217}^{PS}$	98.7	$99^{+30}_{-30}$ (+0.1 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.560	$2.54^{+0.10}_{-0.11}$ (-0.2 $\sigma$ )	$D_A(0.57)$	1235	$1296^{+110}_{-86}$ (+0.0 $\sigma$ )
$A_{217}^{CIB}$	47.2	$45^{+10}_{-10}$ (-2.7 $\sigma$ )	$z_{re}$	9.67	$9.8^{+3.6}_{-3.6}$ (+0.1 $\sigma$ )	$F_{AP}(0.57)$	0.576	$< 0.682$ (+0.1 $\sigma$ )
$A_{143}^{tSZ}$	4.16	$< 6.77$ (-1.0 $\sigma$ )	$10^9 A_s$	2.178	$2.19^{+0.17}_{-0.16}$ (+0.0 $\sigma$ )	$f\sigma_8(0.57)$	0.688	$0.59^{+0.12}_{-0.13}$ (-0.1 $\sigma$ )
$r_{143 \times 217}^{PS}$	0.449	$0.52^{+0.23}_{-0.21}$	$10^9 A_s e^{-2\tau}$	1.8721	$1.874^{+0.027}_{-0.027}$ (-0.4 $\sigma$ )	$\sigma_8(0.57)$	0.834	$0.74^{+0.12}_{-0.14}$ (-0.1 $\sigma$ )
$\xi^{tSZ \times CIB}$	0.00	—	$D_{40}$	1220.2	$1224^{+30}_{-30}$ (-0.6 $\sigma$ )	$Y_P^{BBN}$	0.246274	$0.24627^{+0.00019}_{-0.00020}$ (-3.8 $\sigma$ )
$A^{kSZ}$	3.5	—	$D_{220}$	5701	$5701^{+82}_{-78}$ (-0.5 $\sigma$ )	$f_{2000}^{143}$	28.4	$28^{+6}_{-6}$ (-0.4 $\sigma$ )
$A_{100}^{dust}$	0.985	$0.99^{+0.38}_{-0.38}$	$D_{810}$	2526.9	$2529^{+27}_{-27}$ (-0.4 $\sigma$ )	$f_{2000}^{217}$	106.06	$106.1^{+4.0}_{-4.1}$ (+0.2 $\sigma$ )
$A_{143}^{dust}$	1.026	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	813.2	$814^{+10}_{-10}$ (-0.1 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.26	$31^{+4}_{-4}$ (-0.3 $\sigma$ )
$A_{217}^{dust}$	1.213	$1.22^{+0.23}_{-0.23}$	$n_{s,0.002}$	0.9684	$0.968^{+0.013}_{-0.012}$ (+0.4 $\sigma$ )	$\chi_{lowTEB}^2$	10494.61	$10496.0$ ( $\nu$ : 2.1) (-0.2 $\sigma$ )
$A_{143 \times 217}^{dust}$	0.972	$0.98^{+0.35}_{-0.35}$	$Y_P$	0.244943	$0.24494^{+0.00020}_{-0.00019}$ (-3.9 $\sigma$ )	$\chi_{CamSpec}^2$	8043.9	$8058.5$ ( $\nu$ : 16.3)
$c_{100}$	0.99675	$0.9968^{+0.0019}_{-0.0019}$ (-1.4 $\sigma$ )	Age/Gyr	13.434	$13.58^{+0.29}_{-0.22}$ (+0.0 $\sigma$ )	$\chi_{prior}^2$	3.3	$8.4$ ( $\nu$ : 6.1) (+0.3 $\sigma$ )
$c_{217}$	0.99711	$0.9972^{+0.0035}_{-0.0035}$ (+0.9 $\sigma$ )	$z_*$	1089.89	$1089.94^{+0.84}_{-0.84}$ (-0.1 $\sigma$ )	$\chi_{CMB}^2$	18538.5	$18554.4$ ( $\nu$ : 16.7) (+1306.4 $\sigma$ )

Best-fit  $\chi_{eff}^2 = 18541.74$ ;  $\Delta\chi_{eff}^2 = 7282.83$ ;  $\bar{\chi}_{eff}^2 = 18562.84$ ;  $\Delta\bar{\chi}_{eff}^2 = 7283.07$ ;  $R - 1 = 0.00580$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10494.60 ( $\Delta$  -0.53) CamSpec like.v9.10CMH\_unified: 8043.88

### 21.11 base\_w\_CamSpecHM\_TT\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02224^{+0.00050}_{-0.00045} \quad (+0.0\sigma)$	$H_0$	$68.4^{+3.1}_{-3.2} \quad (+0.0\sigma)$	$z_{\text{drag}}$	$1059.59^{+0.96}_{-0.87} \quad (-0.0\sigma)$
$\Omega_c h^2$	$0.1194^{+0.0041}_{-0.0042} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.695^{+0.030}_{-0.033} \quad (+0.1\sigma)$	$r_{\text{drag}}$	$147.39^{+0.89}_{-0.91} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04093^{+0.00087}_{-0.00088} \quad (+0.1\sigma)$	$\Omega_m$	$0.305^{+0.033}_{-0.030} \quad (-0.1\sigma)$	$k_D$	$0.14047^{+0.00092}_{-0.00096} \quad (-0.1\sigma)$
$\tau$	$0.079^{+0.041}_{-0.037} \quad (+0.0\sigma)$	$\Omega_m h^2$	$0.1423^{+0.0039}_{-0.0040} \quad (-0.1\sigma)$	$100\theta_D$	$0.16094^{+0.00052}_{-0.00055} \quad (-0.1\sigma)$
$w$	$-1.03^{+0.10}_{-0.11} \quad (+0.0\sigma)$	$\Omega_m h^3$	$0.0973^{+0.0046}_{-0.0047} \quad (-0.0\sigma)$	$z_{\text{eq}}$	$3386^{+94}_{-95} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.089^{+0.074}_{-0.071} \quad (-0.0\sigma)$	$\sigma_8$	$0.838^{+0.040}_{-0.041} \quad (-0.0\sigma)$	$100\theta_{\text{eq}}$	$0.816^{+0.018}_{-0.017} \quad (+0.1\sigma)$
$n_s$	$0.968^{+0.012}_{-0.011} \quad (+0.3\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.462^{+0.025}_{-0.025} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0717^{+0.0015}_{-0.0013} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0002^{+0.0049}_{-0.0051} \quad (+0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.622^{+0.028}_{-0.028} \quad (-0.1\sigma)$	$H(0.57)$	$92.88^{+0.96}_{-0.87} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$246^{+50}_{-50} \quad (-0.3\sigma)$	$\sigma_8/h^{0.5}$	$1.013^{+0.042}_{-0.041} \quad (-0.1\sigma)$	$D_A(0.57)$	$1383^{+30}_{-29} \quad (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$39^{+20}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.495^{+0.088}_{-0.087} \quad (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.673^{+0.013}_{-0.012} \quad (-0.0\sigma)$
$A_{217}^{\text{PS}}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$9.98^{+3.6}_{-3.3} \quad (+0.0\sigma)$	$f\sigma_8(0.57)$	$0.489^{+0.029}_{-0.030} \quad (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s$	$2.20^{+0.17}_{-0.15} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.624^{+0.032}_{-0.032} \quad (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.45 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.028}_{-0.026} \quad (-0.3\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24625^{+0.00022}_{-0.00019} \quad (-3.8\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.20}_{-0.20}$	$D_{40}$	$1229^{+28}_{-29} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5698^{+86}_{-79} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.5^{+4.1}_{-4.4} \quad (+0.3\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2530^{+29}_{-28} \quad (-0.2\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-5} \quad (-0.3\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.36}_{-0.37}$	$D_{1420}$	$814^{+10}_{-10} \quad (+0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.7 \quad (\nu: 2.4) \quad (-0.3\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.39}_{-0.38}$	$n_{\text{s},0.002}$	$0.968^{+0.012}_{-0.011} \quad (+0.3\sigma)$	$\chi_{\text{CamSpec}}^2$	$8059.3 \quad (\nu: 17.8)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$Y_{\text{P}}$	$0.24492^{+0.00022}_{-0.00018} \quad (-3.8\sigma)$	$\chi_{\text{JLA}}^2$	$707.7 \quad (\nu: 1.0) \quad (-0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.36}_{-0.35}$	$\text{Age}/\text{Gyr}$	$13.790^{+0.085}_{-0.090} \quad (-0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.6 \quad (\nu: 7.1) \quad (+0.2\sigma)$
$c_{100}$	$0.9968^{+0.0021}_{-0.0021} \quad (-1.4\sigma)$	$z_*$	$1090.02^{+0.81}_{-0.87} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18556.1 \quad (\nu: 17.6) \quad (+248.5\sigma)$
$c_{217}$	$0.9973^{+0.0037}_{-0.0037} \quad (+1.0\sigma)$	$r_*$	$144.68^{+0.91}_{-0.89} \quad (+0.1\sigma)$		
$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	$1.04114^{+0.00087}_{-0.00085} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 19272.37; \Delta\bar{\chi}_{\text{eff}}^2 = 7280.09; R - 1 = 0.04549$$

## 21.12 base\_w\_CamSpecHM\_TT\_lowTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00048}_{-0.00046} \quad (+0.1\sigma)$	$H_0$	$> 63.2 \quad (+0.0\sigma)$	$z_{\text{drag}}$	$1059.62^{+0.97}_{-0.90} \quad (+0.0\sigma)$
$\Omega_c h^2$	$0.1181^{+0.0040}_{-0.0038} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$> 0.645 \quad (+0.0\sigma)$	$r_{\text{drag}}$	$147.68^{+0.83}_{-0.84} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.04114^{+0.00092}_{-0.00092} \quad (+0.1\sigma)$	$\Omega_m$	$< 0.355 \quad (-0.0\sigma)$	$k_D$	$0.14020^{+0.00090}_{-0.00092} \quad (-0.0\sigma)$
$\tau$	$0.063^{+0.034}_{-0.035} \quad (+0.2\sigma)$	$\Omega_m h^2$	$0.1410^{+0.0037}_{-0.0035} \quad (-0.1\sigma)$	$100\theta_D$	$0.16094^{+0.00053}_{-0.00053} \quad (-0.1\sigma)$
$w$	$-1.41^{+0.62}_{-0.54} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.116^{+0.027}_{-0.028} \quad (+0.0\sigma)$	$z_{\text{eq}}$	$3355^{+89}_{-83} \quad (-0.1\sigma)$
$\ln(10^{10} A_s)$	$3.053^{+0.062}_{-0.064} \quad (+0.1\sigma)$	$\sigma_8$	$0.93^{+0.15}_{-0.16} \quad (+0.0\sigma)$	$100\theta_{\text{eq}}$	$0.822^{+0.017}_{-0.017} \quad (+0.1\sigma)$
$n_s$	$0.970^{+0.012}_{-0.012} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.427^{+0.043}_{-0.038} \quad (+0.0\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0745^{+0.0037}_{-0.0046} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$0.9999^{+0.0047}_{-0.0050} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.627^{+0.030}_{-0.034} \quad (+0.1\sigma)$	$H(0.57)$	$91.7^{+2.1}_{-2.5} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$247^{+40}_{-50} \quad (-0.4\sigma)$	$\sigma_8/h^{0.5}$	$1.024^{+0.049}_{-0.056} \quad (+0.1\sigma)$	$D_A(0.57)$	$1305^{+130}_{-100} \quad (-0.0\sigma)$
$A_{143}^{\text{PS}}$	$39^{+10}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.470^{+0.059}_{-0.063} \quad (-0.0\sigma)$	$F_{\text{AP}}(0.57)$	$< 0.695 \quad (-0.0\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-20} \quad (+0.0\sigma)$	$z_{\text{re}}$	$8.4^{+3.3}_{-3.5} \quad (+0.2\sigma)$	$f\sigma_8(0.57)$	$0.56^{+0.11}_{-0.12} \quad (+0.0\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s$	$2.12^{+0.14}_{-0.13} \quad (+0.1\sigma)$	$\sigma_8(0.57)$	$0.70^{+0.12}_{-0.14} \quad (+0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.61 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.867^{+0.026}_{-0.025} \quad (-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24627^{+0.00020}_{-0.00020} \quad (-3.8\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.20}$	$D_{40}$	$1213^{+30}_{-28} \quad (-0.6\sigma)$	$f_{2000}^{143}$	$29^{+5}_{-6} \quad (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5697^{+80}_{-75} \quad (-0.6\sigma)$	$f_{2000}^{217}$	$106.5^{+4.0}_{-4.0} \quad (+0.1\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2527^{+26}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.39}_{-0.38}$	$D_{1420}$	$814^{+10}_{-9.8} \quad (-0.1\sigma)$	$\chi_{\text{lensing}}^2$	$9.9 \quad (\nu: 1.5) \quad (-0.1\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.34}_{-0.36}$	$n_{s,0.002}$	$0.970^{+0.012}_{-0.012} \quad (+0.4\sigma)$	$\chi_{\text{lowTEB}}^2$	$10494.6 \quad (\nu: 0.9) \quad (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.23}$	$Y_{\text{P}}$	$0.24494^{+0.00021}_{-0.00019} \quad (-3.8\sigma)$	$\chi_{\text{CamSpec}}^2$	$8060.9 \quad (\nu: 16.4)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$\text{Age}/\text{Gyr}$	$13.60^{+0.33}_{-0.25} \quad (-0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 6.2) \quad (+0.2\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0020} \quad (-1.5\sigma)$	$z_*$	$1089.83^{+0.84}_{-0.84} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18565.4 \quad (\nu: 16.9) \quad (+655.7\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$r_*$	$144.99^{+0.84}_{-0.85} \quad (+0.1\sigma)$		
$\beta_1^1$	$0.0^{+2.0}_{-2.0}$	$100\theta_*$	$1.04135^{+0.00090}_{-0.00091} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18573.85; \Delta\bar{\chi}_{\text{eff}}^2 = 7281.36; R - 1 = 0.01749$$

### 21.13 base\_w\_CamSpecHM\_TT\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02225^{+0.00047}_{-0.00045} \quad (+0.1\sigma)$	$H_0$	$71.8^{+6.7}_{-6.6} \quad (+0.0\sigma)$	$z_{\text{drag}}$	$1059.60^{+0.95}_{-0.88} \quad (+0.0\sigma)$
$\Omega_c h^2$	$0.1195^{+0.0043}_{-0.0042} \quad (-0.2\sigma)$	$\Omega_\Lambda$	$0.722^{+0.053}_{-0.055} \quad (+0.0\sigma)$	$r_{\text{drag}}$	$147.36^{+0.91}_{-0.93} \quad (+0.2\sigma)$
$100\theta_{\text{MC}}$	$1.04092^{+0.00090}_{-0.00089} \quad (+0.1\sigma)$	$\Omega_m$	$0.278^{+0.055}_{-0.053} \quad (-0.0\sigma)$	$k_D$	$0.14050^{+0.00097}_{-0.0010} \quad (-0.1\sigma)$
$\tau$	$0.078^{+0.039}_{-0.038} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1424^{+0.0041}_{-0.0039} \quad (-0.2\sigma)$	$100\theta_D$	$0.16093^{+0.00052}_{-0.00053} \quad (-0.1\sigma)$
$w$	$-1.14^{+0.22}_{-0.22} \quad (+0.0\sigma)$	$\Omega_m h^3$	$0.1023^{+0.0099}_{-0.0094} \quad (-0.0\sigma)$	$z_{\text{eq}}$	$3388^{+98}_{-94} \quad (-0.2\sigma)$
$\ln(10^{10} A_s)$	$3.087^{+0.075}_{-0.071} \quad (+0.0\sigma)$	$\sigma_8$	$0.870^{+0.069}_{-0.069} \quad (-0.0\sigma)$	$100\theta_{\text{eq}}$	$0.816^{+0.018}_{-0.018} \quad (+0.2\sigma)$
$n_s$	$0.968^{+0.012}_{-0.011} \quad (+0.4\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.457^{+0.026}_{-0.026} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.0725^{+0.0019}_{-0.0019} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$1.0002^{+0.0049}_{-0.0050} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.630^{+0.032}_{-0.031} \quad (-0.1\sigma)$	$H(0.57)$	$92.6^{+1.1}_{-1.2} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$245^{+40}_{-50} \quad (-0.5\sigma)$	$\sigma_8/h^{0.5}$	$1.026^{+0.047}_{-0.047} \quad (-0.1\sigma)$	$D_A(0.57)$	$1359^{+50}_{-48} \quad (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$39^{+20}_{-20} \quad (-0.6\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.509^{+0.094}_{-0.095} \quad (-0.2\sigma)$	$F_{\text{AP}}(0.57)$	$0.659^{+0.026}_{-0.025} \quad (-0.0\sigma)$
$A_{217}^{\text{PS}}$	$99^{+20}_{-30} \quad (+0.1\sigma)$	$z_{\text{re}}$	$9.9^{+3.6}_{-3.5} \quad (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.512^{+0.052}_{-0.049} \quad (-0.1\sigma)$
$A_{217}^{\text{CIB}}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s$	$2.19^{+0.17}_{-0.15} \quad (+0.0\sigma)$	$\sigma_8(0.57)$	$0.651^{+0.055}_{-0.055} \quad (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.78 \quad (-1.0\sigma)$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.027}_{-0.026} \quad (-0.4\sigma)$	$Y_{\text{P}}^{\text{BBN}}$	$0.24625^{+0.00020}_{-0.00020} \quad (-3.9\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.22}_{-0.22}$	$D_{40}$	$1228^{+27}_{-29} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$29^{+6}_{-6} \quad (-0.4\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{220}$	$5698^{+80}_{-77} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.3^{+4.0}_{-4.2} \quad (+0.2\sigma)$
$A^{\text{kSZ}}$	—	$D_{810}$	$2530^{+27}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4} \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.39}_{-0.38}$	$D_{1420}$	$814.0^{+9.8}_{-9.9} \quad (-0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.5 \quad (\nu: 2.3) \quad (-0.3\sigma)$
$A_{143}^{\text{dust}}$	$1.03^{+0.37}_{-0.36}$	$n_{\text{s},0.002}$	$0.968^{+0.012}_{-0.011} \quad (+0.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$8059.0 \quad (\nu: 16.5)$
$A_{217}^{\text{dust}}$	$1.22^{+0.22}_{-0.23}$	$Y_{\text{P}}$	$0.24492^{+0.00020}_{-0.00019} \quad (-3.9\sigma)$	$\chi_{\text{H070p6}}^2$	$0.99 \quad (\nu: 1.0) \quad (+0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.35}$	$\text{Age}/\text{Gyr}$	$13.73^{+0.13}_{-0.13} \quad (-0.0\sigma)$	$\chi_{\text{prior}}^2$	$8.5 \quad (\nu: 6.7) \quad (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$z_*$	$1090.02^{+0.82}_{-0.84} \quad (-0.2\sigma)$	$\chi_{\text{CMB}}^2$	$18555.5 \quad (\nu: 16.5) \quad (+438.1\sigma)$
$c_{217}$	$0.9972^{+0.0036}_{-0.0034} \quad (+0.9\sigma)$	$r_*$	$144.65^{+0.92}_{-0.94} \quad (+0.2\sigma)$		
$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.04113^{+0.00089}_{-0.00088} \quad (+0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18565.02; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.00; R - 1 = 0.01902$$



## 21.14 base\_w\_CamSpecHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02229^{+0.00046}_{-0.00044}$ (+0.0 $\sigma$ )	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$r_*$	$144.72^{+0.92}_{-0.93}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	$0.1191^{+0.0041}_{-0.0041}$ (-0.2 $\sigma$ )	$H_0$	$> 66.1$ (-0.1 $\sigma$ )	$100\theta_*$	$1.04119^{+0.00090}_{-0.00089}$ (+0.1 $\sigma$ )
$100\theta_{MC}$	$1.04099^{+0.00092}_{-0.00090}$ (+0.1 $\sigma$ )	$\Omega_\Lambda$	$> 0.674$ (-0.0 $\sigma$ )	$z_{drag}$	$1059.68^{+0.94}_{-0.88}$ (-0.0 $\sigma$ )
$\tau$	$0.079^{+0.035}_{-0.034}$ (+0.1 $\sigma$ )	$\Omega_m$	$< 0.326$ (+0.0 $\sigma$ )	$r_{drag}$	$147.41^{+0.91}_{-0.92}$ (+0.2 $\sigma$ )
$w$	$-1.51^{+0.60}_{-0.51}$ (+0.1 $\sigma$ )	$\Omega_m h^2$	$0.1421^{+0.0039}_{-0.0039}$ (-0.2 $\sigma$ )	$k_D$	$0.14048^{+0.00099}_{-0.00098}$ (-0.1 $\sigma$ )
$\ln(10^{10} A_s)$	$3.089^{+0.069}_{-0.067}$ (+0.0 $\sigma$ )	$\Omega_m h^3$	$0.120^{+0.025}_{-0.028}$ (-0.1 $\sigma$ )	$100\theta_D$	$0.16089^{+0.00052}_{-0.00052}$ (-0.1 $\sigma$ )
$n_s$	$0.969^{+0.013}_{-0.012}$ (+0.4 $\sigma$ )	$\sigma_8$	$0.97^{+0.15}_{-0.17}$ (-0.1 $\sigma$ )	$z_{eq}$	$3379^{+94}_{-93}$ (-0.2 $\sigma$ )
$y_{cal}$	$1.0002^{+0.0049}_{-0.0050}$ (-0.0 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	$0.436^{+0.042}_{-0.038}$ (-0.0 $\sigma$ )	$100\theta_{eq}$	$0.817^{+0.018}_{-0.017}$ (+0.2 $\sigma$ )
$A_{100}^{PS}$	$244^{+40}_{-40}$ (-0.4 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	$0.650^{+0.041}_{-0.044}$ (-0.1 $\sigma$ )	$r_{drag}/D_V(0.57)$	$0.0745^{+0.0034}_{-0.0040}$ (+0.0 $\sigma$ )
$A_{143}^{PS}$	$38^{+20}_{-20}$ (-0.6 $\sigma$ )	$\sigma_8/h^{0.5}$	$1.058^{+0.064}_{-0.071}$ (-0.1 $\sigma$ )	$H(0.57)$	$91.1^{+2.4}_{-2.6}$ (+0.1 $\sigma$ )
$A_{217}^{PS}$	$99^{+30}_{-30}$ (+0.1 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	$2.539^{+0.098}_{-0.10}$ (-0.2 $\sigma$ )	$D_A(0.57)$	$1296^{+110}_{-87}$ (+0.0 $\sigma$ )
$A_{217}^{CIB}$	$45^{+10}_{-10}$ (-2.7 $\sigma$ )	$z_{re}$	$9.96^{+2.9}_{-3.3}$ (+0.1 $\sigma$ )	$F_{AP}(0.57)$	$< 0.682$ (+0.1 $\sigma$ )
$A_{143}^{tSZ}$	$< 6.81$ (-1.0 $\sigma$ )	$10^9 A_s$	$2.20^{+0.15}_{-0.15}$ (+0.0 $\sigma$ )	$f\sigma_8(0.57)$	$0.59^{+0.12}_{-0.13}$ (-0.1 $\sigma$ )
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.21}$	$10^9 A_s e^{-2\tau}$	$1.874^{+0.027}_{-0.027}$ (-0.4 $\sigma$ )	$\sigma_8(0.57)$	$0.74^{+0.12}_{-0.14}$ (-0.1 $\sigma$ )
$\xi^{tSZ \times CIB}$	—	$D_{40}$	$1224^{+30}_{-29}$ (-0.6 $\sigma$ )	$Y_P^{BBN}$	$0.24627^{+0.00019}_{-0.00019}$ (-3.9 $\sigma$ )
$A^{kSZ}$	—	$D_{220}$	$5701^{+82}_{-77}$ (-0.5 $\sigma$ )	$f_{2000}^{143}$	$28^{+6}_{-6}$ (-0.4 $\sigma$ )
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$D_{810}$	$2529^{+27}_{-27}$ (-0.3 $\sigma$ )	$f_{2000}^{217}$	$106.0^{+4.0}_{-4.0}$ (+0.2 $\sigma$ )
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	$814^{+10}_{-10}$ (-0.1 $\sigma$ )	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4}$ (-0.3 $\sigma$ )
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.969^{+0.013}_{-0.012}$ (+0.4 $\sigma$ )	$\chi_{lowTEB}^2$	$10496.0$ ( $\nu$ : 2.2) (-0.2 $\sigma$ )
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.36}$	$Y_P$	$0.24494^{+0.00020}_{-0.00018}$ (-3.9 $\sigma$ )	$\chi_{CamSpec}^2$	$8058.4$ ( $\nu$ : 16.1)
$c_{100}$	$0.9968^{+0.0020}_{-0.0019}$ (-1.4 $\sigma$ )	Age/Gyr	$13.58^{+0.29}_{-0.22}$ (+0.0 $\sigma$ )	$\chi_{prior}^2$	$8.4$ ( $\nu$ : 6.3) (+0.3 $\sigma$ )
$c_{217}$	$0.9971^{+0.0035}_{-0.0035}$ (+0.9 $\sigma$ )	$z_*$	$1089.92^{+0.82}_{-0.83}$ (-0.1 $\sigma$ )	$\chi_{CMB}^2$	$18554.3$ ( $\nu$ : 16.4) (+678.2 $\sigma$ )

$$\bar{\chi}_{eff}^2 = 18562.75; \Delta\bar{\chi}_{eff}^2 = 7282.66; R - 1 = 0.00780$$

## 21.15 base\_w\_CamSpecHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022416	$0.02239^{+0.00032}_{-0.00031}$ (+0.7 $\sigma$ )	$\mathcal{C}_{EE}$	1.0008	$1.0007^{+0.0082}_{-0.0082}$	$r_*$	144.74	$144.69^{+0.61}_{-0.60}$ (+0.3 $\sigma$ )
$\Omega_c h^2$	0.11868	$0.1189^{+0.0028}_{-0.0028}$ (-0.4 $\sigma$ )	$\beta_1^1$	-0.09	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	1.04108	$1.04104^{+0.00059}_{-0.00059}$ (+0.1 $\sigma$ )
$100\theta_{MC}$	1.04089	$1.04085^{+0.00060}_{-0.00060}$ (+0.1 $\sigma$ )	$H_0$	99.7	$> 66.1$ (-0.1 $\sigma$ )	$z_{drag}$	1059.93	$1059.89^{+0.65}_{-0.64}$ (+0.6 $\sigma$ )
$\tau$	0.0734	$0.074^{+0.035}_{-0.035}$ (-0.0 $\sigma$ )	$\Omega_\Lambda$	0.857	$> 0.674$ (-0.1 $\sigma$ )	$r_{drag}$	147.39	$147.35^{+0.61}_{-0.60}$ (+0.2 $\sigma$ )
$w$	-1.91	$-1.50^{+0.60}_{-0.50}$ (+0.2 $\sigma$ )	$\Omega_m$	0.143	$< 0.326$ (+0.1 $\sigma$ )	$k_D$	0.14060	$0.14062^{+0.00066}_{-0.00066}$ (+0.1 $\sigma$ )
$\ln(10^{10} A_s)$	3.077	$3.079^{+0.068}_{-0.069}$ (-0.2 $\sigma$ )	$\Omega_m h^2$	0.14174	$0.1420^{+0.0026}_{-0.0026}$ (-0.4 $\sigma$ )	$100\theta_D$	0.160715	$0.16074^{+0.00037}_{-0.00038}$ (-0.7 $\sigma$ )
$n_s$	0.9687	$0.9684^{+0.0092}_{-0.0093}$ (+0.7 $\sigma$ )	$\Omega_m h^3$	0.1413	$0.120^{+0.024}_{-0.028}$ (-0.2 $\sigma$ )	$z_{eq}$	3372	$3377^{+62}_{-62}$ (-0.4 $\sigma$ )
$y_{cal}$	1.00056	$1.0002^{+0.0047}_{-0.0048}$ (-0.1 $\sigma$ )	$\sigma_8$	1.081	$0.96^{+0.14}_{-0.17}$ (-0.2 $\sigma$ )	$100\theta_{eq}$	0.8189	$0.818^{+0.012}_{-0.012}$ (+0.4 $\sigma$ )
$A_{100}^{PS}$	242.4	$243^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4082	$0.433^{+0.039}_{-0.034}$ (-0.1 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07638	$0.0745^{+0.0029}_{-0.0038}$ (+0.0 $\sigma$ )
$A_{143}^{PS}$	34.8	$38^{+10}_{-10}$ (-0.7 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6641	$0.645^{+0.037}_{-0.041}$ (-0.5 $\sigma$ )	$H(0.57)$	89.21	$91.2^{+2.3}_{-2.4}$ (+0.3 $\sigma$ )
$A_{217}^{PS}$	99.6	$99^{+30}_{-30}$ (+0.1 $\sigma$ )	$\sigma_8/h^{0.5}$	1.082	$1.050^{+0.059}_{-0.066}$ (-0.4 $\sigma$ )	$D_A(0.57)$	1234	$1296^{+110}_{-82}$ (+0.1 $\sigma$ )
$A_{217}^{CIB}$	47.0	$45^{+10}_{-10}$ (-2.8 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.551	$2.524^{+0.090}_{-0.096}$ (-0.6 $\sigma$ )	$F_{AP}(0.57)$	0.576	$< 0.682$ (+0.1 $\sigma$ )
$A_{143}^{tSZ}$	4.58	$< 6.85$ (-1.1 $\sigma$ )	$z_{re}$	9.43	$9.5^{+3.3}_{-3.4}$ (-0.1 $\sigma$ )	$f\sigma_8(0.57)$	0.681	$0.59^{+0.11}_{-0.13}$ (-0.3 $\sigma$ )
$r_{143 \times 217}^{PS}$	0.457	$0.52^{+0.23}_{-0.22}$	$10^9 A_s$	2.170	$2.18^{+0.15}_{-0.15}$ (-0.2 $\sigma$ )	$\sigma_8(0.57)$	0.828	$0.73^{+0.12}_{-0.14}$ (-0.2 $\sigma$ )
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8740	$1.873^{+0.023}_{-0.023}$ (-0.7 $\sigma$ )	$Y_P^{BBN}$	0.246323	$0.24631^{+0.00013}_{-0.00014}$ (-5.1 $\sigma$ )
$A^{kSZ}$	2.8	—	$D_{40}$	1221.5	$1224^{+26}_{-25}$ (-0.9 $\sigma$ )	$f_{2000}^{143}$	28.0	$28^{+5}_{-5}$ (-0.5 $\sigma$ )
$A_{100}^{dust}$	0.983	$0.99^{+0.38}_{-0.38}$	$D_{220}$	5722	$5713^{+76}_{-75}$ (-0.5 $\sigma$ )	$f_{2000}^{217}$	105.68	$105.8^{+3.7}_{-3.7}$ (+0.1 $\sigma$ )
$A_{143}^{dust}$	1.007	$1.02^{+0.36}_{-0.36}$	$D_{810}$	2530.9	$2529^{+26}_{-26}$ (-0.4 $\sigma$ )	$f_{2000}^{143 \times 217}$	30.79	$31^{+4}_{-4}$ (-0.5 $\sigma$ )
$A_{217}^{dust}$	1.210	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	815.0	$814.4^{+9.2}_{-9.2}$ (+0.0 $\sigma$ )	$\chi_{lowTEB}^2$	10494.44	$10495.6$ ( $\nu$ : 1.5) (-0.5 $\sigma$ )
$A_{143 \times 217}^{dust}$	0.977	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	0.9687	$0.9684^{+0.0092}_{-0.0093}$ (+0.7 $\sigma$ )	$\chi_{CamSpec}^2$	12935.4	$12951.7$ ( $\nu$ : 17.4)
$c_{100}$	0.99683	$0.9968^{+0.0019}_{-0.0019}$ (-1.8 $\sigma$ )	$Y_P$	0.244992	$0.24498^{+0.00014}_{-0.00013}$ (-5.2 $\sigma$ )	$\chi_{prior}^2$	3.2	$8.8$ ( $\nu$ : 6.2) (-1.9 $\sigma$ )
$c_{217}$	0.99690	$0.9970^{+0.0034}_{-0.0034}$ (+0.7 $\sigma$ )	Age/Gyr	13.427	$13.57^{+0.28}_{-0.20}$ (+0.0 $\sigma$ )	$\chi_{CMB}^2$	23429.8	$23447.3$ ( $\nu$ : 18.1) (+1563.3 $\sigma$ )
$c_{TE}$	1.0032	$1.0036^{+0.0088}_{-0.0087}$	$z_*$	1089.73	$1089.79^{+0.58}_{-0.57}$ (-0.7 $\sigma$ )			

Best-fit  $\chi_{eff}^2 = 23433.04$ ;  $\Delta\chi_{eff}^2 = 10500.78$ ;  $\bar{\chi}_{eff}^2 = 23456.17$ ;  $\Delta\bar{\chi}_{eff}^2 = 10491.10$ ;  $R - 1 = 0.01016$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.44 ( $\Delta$  -0.83) CamSpec like\_v9.10CMH\_unified: 12935.40

## 21.16 base\_w\_CamSpecHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00033}_{-0.00032}$	$c_{EE}$	$1.0007^{+0.0081}_{-0.0086}$	$r_*$	$144.69^{+0.65}_{-0.68}$
$\Omega_c h^2$	$0.1190^{+0.0030}_{-0.0028}$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.04105^{+0.00059}_{-0.00061}$
$100\theta_{MC}$	$1.04085^{+0.00059}_{-0.00061}$	$H_0$	$68.4^{+3.1}_{-3.0}$	$z_{drag}$	$1059.84^{+0.66}_{-0.64}$
$\tau$	$0.079^{+0.035}_{-0.036}$	$\Omega_\Lambda$	$0.696^{+0.030}_{-0.029}$	$r_{drag}$	$147.36^{+0.64}_{-0.66}$
$w$	$-1.023^{+0.099}_{-0.10}$	$\Omega_m$	$0.304^{+0.029}_{-0.030}$	$k_D$	$0.14060^{+0.00067}_{-0.00070}$
$\ln(10^{10} A_s)$	$3.089^{+0.063}_{-0.066}$	$\Omega_m h^2$	$0.1420^{+0.0028}_{-0.0026}$	$100\theta_D$	$0.16077^{+0.00039}_{-0.00037}$
$n_s$	$0.9685^{+0.0097}_{-0.0094}$	$\Omega_m h^3$	$0.0971^{+0.0046}_{-0.0043}$	$z_{eq}$	$3379^{+68}_{-63}$
$y_{cal}$	$1.0002^{+0.0048}_{-0.0047}$	$\sigma_8$	$0.834^{+0.039}_{-0.039}$	$100\theta_{eq}$	$0.817^{+0.012}_{-0.013}$
$A_{100}^{PS}$	$244^{+40}_{-40}$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.019}_{-0.020}$	$r_{drag}/D_V(0.57)$	$0.0718^{+0.0011}_{-0.0011}$
$A_{143}^{PS}$	$38^{+10}_{-10}$	$\sigma_8 \Omega_m^{0.25}$	$0.619^{+0.023}_{-0.023}$	$H(0.57)$	$93.01^{+0.60}_{-0.59}$
$A_{217}^{PS}$	$99^{+30}_{-30}$	$\sigma_8/h^{0.5}$	$1.009^{+0.036}_{-0.036}$	$D_A(0.57)$	$1381^{+27}_{-27}$
$A_{217}^{CIB}$	$45^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	$2.487^{+0.083}_{-0.079}$	$F_{AP}(0.57)$	$0.673^{+0.013}_{-0.013}$
$A_{143}^{tSZ}$	$< 6.83$	$z_{re}$	$10.0^{+2.8}_{-3.2}$	$f\sigma_8(0.57)$	$0.486^{+0.027}_{-0.026}$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.21}$	$10^9 A_s$	$2.20^{+0.14}_{-0.14}$	$\sigma_8(0.57)$	$0.621^{+0.031}_{-0.031}$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.873^{+0.022}_{-0.023}$	$Y_P^{BBN}$	$0.24630^{+0.00014}_{-0.00013}$
$A^{kSZ}$	—	$D_{40}$	$1229^{+25}_{-25}$	$f_{2000}^{143}$	$28^{+5}_{-6}$
$A_{100}^{dust}$	$0.99^{+0.37}_{-0.39}$	$D_{220}$	$5709^{+76}_{-73}$	$f_{2000}^{217}$	$105.9^{+3.8}_{-3.7}$
$A_{143}^{dust}$	$1.03^{+0.35}_{-0.37}$	$D_{810}$	$2530^{+26}_{-27}$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4}$
$A_{217}^{dust}$	$1.22^{+0.24}_{-0.23}$	$D_{1420}$	$814.8^{+9.4}_{-9.7}$	$\chi^2_{lowTEB}$	$10496.5 (\nu: 2.1)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.36}_{-0.36}$	$n_{s,0.002}$	$0.9685^{+0.0097}_{-0.0094}$	$\chi^2_{CamSpec}$	$12952.3 (\nu: 16.9)$
$c_{100}$	$0.9968^{+0.0020}_{-0.0019}$	$Y_P$	$0.24497^{+0.00014}_{-0.00014}$	$\chi^2_{JLA}$	$707.6 (\nu: 1.0)$
$c_{217}$	$0.9971^{+0.0036}_{-0.0036}$	Age/Gyr	$13.783^{+0.076}_{-0.072}$	$\chi^2_{prior}$	$8.9 (\nu: 6.5)$
$c_{TE}$	$1.0042^{+0.0084}_{-0.0091}$	$z_*$	$1089.83^{+0.57}_{-0.59}$	$\chi^2_{CMB}$	$23448.9 (\nu: 16.8)$

$$\bar{\chi}^2_{eff} = 24165.35; R - 1 = 0.06323$$

## 21.17 base\_w\_CamSpecHM\_TTTEEE\_lowTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00031}_{-0.00031}$ (+0.6 $\sigma$ )	$c_{EE}$	$1.0014^{+0.0082}_{-0.0082}$	$r_*$	$144.81^{+0.58}_{-0.59}$ (+0.2 $\sigma$ )
$\Omega_c h^2$	$0.1186^{+0.0027}_{-0.0026}$ (-0.3 $\sigma$ )	$\beta_1^1$	$-0.1^{+2.1}_{-2.0}$	$100\theta_*$	$1.04111^{+0.00058}_{-0.00058}$ (+0.1 $\sigma$ )
$100\theta_{MC}$	$1.04092^{+0.00060}_{-0.00060}$ (+0.1 $\sigma$ )	$H_0$	$> 63.1$ (-0.0 $\sigma$ )	$z_{drag}$	$1059.82^{+0.65}_{-0.61}$ (+0.5 $\sigma$ )
$\tau$	$0.059^{+0.031}_{-0.031}$ (+0.2 $\sigma$ )	$\Omega_\Lambda$	$> 0.644$ (+0.0 $\sigma$ )	$r_{drag}$	$147.47^{+0.57}_{-0.58}$ (+0.1 $\sigma$ )
$w$	$-1.41^{+0.61}_{-0.56}$ (+0.0 $\sigma$ )	$\Omega_m$	$< 0.356$ (-0.0 $\sigma$ )	$k_D$	$0.14048^{+0.00063}_{-0.00060}$ (+0.2 $\sigma$ )
$\ln(10^{10} A_s)$	$3.046^{+0.059}_{-0.058}$ (+0.0 $\sigma$ )	$\Omega_m h^2$	$0.1416^{+0.0026}_{-0.0025}$ (-0.3 $\sigma$ )	$100\theta_D$	$0.16079^{+0.00036}_{-0.00036}$ (-0.7 $\sigma$ )
$n_s$	$0.9688^{+0.0089}_{-0.0090}$ (+0.6 $\sigma$ )	$\Omega_m h^3$	$0.115^{+0.027}_{-0.028}$ (-0.0 $\sigma$ )	$z_{eq}$	$3368^{+62}_{-59}$ (-0.3 $\sigma$ )
$y_{cal}$	$0.9999^{+0.0047}_{-0.0046}$ (-0.1 $\sigma$ )	$\sigma_8$	$0.92^{+0.15}_{-0.16}$ (-0.0 $\sigma$ )	$100\theta_{eq}$	$0.820^{+0.012}_{-0.012}$ (+0.3 $\sigma$ )
$A_{100}^{PS}$	$246^{+40}_{-40}$ (-0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	$0.428^{+0.041}_{-0.037}$ (-0.1 $\sigma$ )	$r_{drag}/D_V(0.57)$	$0.0742^{+0.0033}_{-0.0043}$ (+0.1 $\sigma$ )
$A_{143}^{PS}$	$38^{+10}_{-10}$ (-0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	$0.626^{+0.030}_{-0.033}$ (-0.1 $\sigma$ )	$H(0.57)$	$91.6^{+2.0}_{-2.4}$ (+0.2 $\sigma$ )
$A_{217}^{PS}$	$97^{+30}_{-30}$ (+0.1 $\sigma$ )	$\sigma_8/h^{0.5}$	$1.021^{+0.049}_{-0.054}$ (-0.1 $\sigma$ )	$D_A(0.57)$	$1310^{+120}_{-97}$ (-0.0 $\sigma$ )
$A_{217}^{CIB}$	$46^{+10}_{-10}$ (-2.9 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	$2.467^{+0.059}_{-0.061}$ (-0.4 $\sigma$ )	$F_{AP}(0.57)$	$< 0.696$ (+0.0 $\sigma$ )
$A_{143}^{tSZ}$	$< 6.67$ (-1.1 $\sigma$ )	$z_{re}$	$8.0^{+3.0}_{-3.1}$ (+0.1 $\sigma$ )	$f\sigma_8(0.57)$	$0.56^{+0.12}_{-0.12}$ (-0.1 $\sigma$ )
$r_{143 \times 217}^{PS}$	$0.51^{+0.23}_{-0.21}$	$10^9 A_s$	$2.10^{+0.13}_{-0.12}$ (+0.0 $\sigma$ )	$\sigma_8(0.57)$	$0.70^{+0.12}_{-0.14}$ (-0.0 $\sigma$ )
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.870^{+0.022}_{-0.022}$ (-0.6 $\sigma$ )	$Y_P^{BBN}$	$0.24630^{+0.00013}_{-0.00013}$ (-5.3 $\sigma$ )
$A^{kSZ}$	—	$D_{40}$	$1217^{+26}_{-24}$ (-0.7 $\sigma$ )	$f_{2000}^{143}$	$29^{+5}_{-5}$ (-0.5 $\sigma$ )
$A_{100}^{dust}$	$0.99^{+0.37}_{-0.38}$	$D_{220}$	$5708^{+76}_{-72}$ (-0.5 $\sigma$ )	$f_{2000}^{217}$	$106.2^{+3.6}_{-3.6}$ (+0.0 $\sigma$ )
$A_{143}^{dust}$	$1.04^{+0.36}_{-0.36}$	$D_{810}$	$2528^{+26}_{-25}$ (-0.4 $\sigma$ )	$f_{2000}^{143 \times 217}$	$32^{+4}_{-4}$ (-0.6 $\sigma$ )
$A_{217}^{dust}$	$1.21^{+0.22}_{-0.22}$	$D_{1420}$	$814.3^{+8.8}_{-9.0}$ (-0.0 $\sigma$ )	$\chi^2_{lensing}$	$10.0 (\nu: 1.5)$ (-0.3 $\sigma$ )
$A_{143 \times 217}^{dust}$	$0.98^{+0.34}_{-0.35}$	$n_{s,0.002}$	$0.9688^{+0.0089}_{-0.0090}$ (+0.6 $\sigma$ )	$\chi^2_{lowTEB}$	$10494.7 (\nu: 0.8)$ (-0.5 $\sigma$ )
$c_{100}$	$0.9967^{+0.0019}_{-0.0019}$ (-1.7 $\sigma$ )	$Y_P$	$0.24497^{+0.00014}_{-0.00013}$ (-5.3 $\sigma$ )	$\chi^2_{CamSpec}$	$12953.5 (\nu: 17.5)$
$c_{217}$	$0.9971^{+0.0034}_{-0.0034}$ (+0.8 $\sigma$ )	$Age/Gyr$	$13.61^{+0.32}_{-0.24}$ (-0.1 $\sigma$ )	$\chi^2_{prior}$	$9.0 (\nu: 6.0)$ (-1.9 $\sigma$ )
$c_{TE}$	$1.0050^{+0.0086}_{-0.0087}$	$z_*$	$1089.78^{+0.55}_{-0.54}$ (-0.6 $\sigma$ )	$\chi^2_{CMB}$	$23458.3 (\nu: 18.1)$ (+1541.3 $\sigma$ )

$$\bar{\chi}^2_{eff} = 23467.26; \Delta\bar{\chi}^2_{eff} = 10488.83; R - 1 = 0.02020$$

# 21.18 base\_w\_CamSpecHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00033}_{-0.00031} \quad (+0.7\sigma)$	$c_{EE}$	$1.0008^{+0.0082}_{-0.0086}$	$r_*$	$144.67^{+0.61}_{-0.67} \quad (+0.4\sigma)$
$\Omega_c h^2$	$0.1191^{+0.0030}_{-0.0028} \quad (-0.5\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-1.9}$	$100\theta_*$	$1.04104^{+0.00060}_{-0.00061} \quad (+0.2\sigma)$
$100\theta_{MC}$	$1.04085^{+0.00060}_{-0.00061} \quad (+0.2\sigma)$	$H_0$	$71.8^{+6.8}_{-6.6} \quad (-0.1\sigma)$	$z_{drag}$	$1059.85^{+0.66}_{-0.66} \quad (+0.6\sigma)$
$\tau$	$0.077^{+0.034}_{-0.034} \quad (+0.0\sigma)$	$\Omega_\Lambda$	$0.722^{+0.053}_{-0.055} \quad (-0.0\sigma)$	$r_{drag}$	$147.34^{+0.63}_{-0.66} \quad (+0.2\sigma)$
$w$	$-1.13^{+0.22}_{-0.22} \quad (+0.2\sigma)$	$\Omega_m$	$0.278^{+0.055}_{-0.053} \quad (+0.0\sigma)$	$k_D$	$0.14062^{+0.00070}_{-0.00068} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.085^{+0.066}_{-0.067} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1421^{+0.0028}_{-0.0026} \quad (-0.5\sigma)$	$100\theta_D$	$0.16076^{+0.00039}_{-0.00038} \quad (-0.7\sigma)$
$n_s$	$0.9682^{+0.0094}_{-0.0094} \quad (+0.8\sigma)$	$\Omega_m h^3$	$0.1020^{+0.0098}_{-0.0095} \quad (-0.2\sigma)$	$z_{eq}$	$3380^{+68}_{-62} \quad (-0.5\sigma)$
$y_{cal}$	$1.0001^{+0.0047}_{-0.0048} \quad (-0.1\sigma)$	$\sigma_8$	$0.864^{+0.066}_{-0.065} \quad (-0.3\sigma)$	$100\theta_{eq}$	$0.817^{+0.012}_{-0.013} \quad (+0.5\sigma)$
$A_{100}^{PS}$	$244^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.454^{+0.022}_{-0.021} \quad (-0.4\sigma)$	$r_{drag}/D_V(0.57)$	$0.0726^{+0.0016}_{-0.0018} \quad (+0.1\sigma)$
$A_{143}^{PS}$	$38^{+10}_{-20} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.626^{+0.027}_{-0.027} \quad (-0.5\sigma)$	$H(0.57)$	$92.75^{+0.85}_{-0.89} \quad (+0.5\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.020^{+0.042}_{-0.040} \quad (-0.5\sigma)$	$D_A(0.57)$	$1358^{+49}_{-48} \quad (-0.0\sigma)$
$A_{217}^{CIB}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.498^{+0.083}_{-0.085} \quad (-0.6\sigma)$	$F_{AP}(0.57)$	$0.660^{+0.027}_{-0.025} \quad (+0.1\sigma)$
$A_{143}^{tSZ}$	$< 6.73 \quad (-1.1\sigma)$	$z_{re}$	$9.8^{+3.1}_{-3.2} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.507^{+0.048}_{-0.046} \quad (-0.3\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.22}_{-0.22}$	$10^9 A_s$	$2.19^{+0.15}_{-0.14} \quad (-0.1\sigma)$	$\sigma_8(0.57)$	$0.647^{+0.054}_{-0.054} \quad (-0.2\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.873^{+0.022}_{-0.022} \quad (-0.7\sigma)$	$Y_P^{BBN}$	$0.24630^{+0.00014}_{-0.00014} \quad (-5.0\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1227^{+25}_{-26} \quad (-0.9\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.5\sigma)$
$A_{100}^{dust}$	$0.99^{+0.37}_{-0.39}$	$D_{220}$	$5709^{+75}_{-73} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$105.8^{+3.6}_{-3.7} \quad (+0.0\sigma)$
$A_{143}^{dust}$	$1.03^{+0.36}_{-0.38}$	$D_{810}$	$2529^{+26}_{-26} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.22}$	$D_{1420}$	$814.5^{+9.4}_{-9.3} \quad (+0.0\sigma)$	$\chi_{lowTEB}^2$	$10496.2 \quad (\nu: 1.8) \quad (-0.5\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.36}_{-0.35}$	$n_{s,0.002}$	$0.9682^{+0.0094}_{-0.0094} \quad (+0.8\sigma)$	$\chi_{CamSpec}^2$	$12952.1 \quad (\nu: 18.1)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.24497^{+0.00014}_{-0.00014} \quad (-5.1\sigma)$	$\chi_{H070p6}^2$	$1.0 \quad (\nu: 1.0) \quad (-0.0\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0035} \quad (+0.7\sigma)$	$Age/Gyr$	$13.72^{+0.13}_{-0.12} \quad (-0.1\sigma)$	$\chi_{prior}^2$	$8.9 \quad (\nu: 6.3) \quad (-1.9\sigma)$
$c_{TE}$	$1.0040^{+0.0087}_{-0.0089}$	$z_*$	$1089.83^{+0.58}_{-0.58} \quad (-0.8\sigma)$	$\chi_{CMB}^2$	$23448.3 \quad (\nu: 18.2) \quad (+1568.9\sigma)$

$$\bar{\chi}_{eff}^2 = 23458.22; \Delta\bar{\chi}_{eff}^2 = 10490.60; R - 1 = 0.02918$$

## 21.19 base\_w\_CamSpecHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02240^{+0.00032}_{-0.00031} \quad (+0.7\sigma)$	$c_{EE}$	$1.0007^{+0.0082}_{-0.0082}$	$r_*$	$144.70^{+0.61}_{-0.60} \quad (+0.3\sigma)$
$\Omega_c h^2$	$0.1189^{+0.0028}_{-0.0028} \quad (-0.5\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	$1.04105^{+0.00059}_{-0.00059} \quad (+0.2\sigma)$
$100\theta_{MC}$	$1.04086^{+0.00059}_{-0.00060} \quad (+0.1\sigma)$	$H_0$	$> 66.1 \quad (-0.1\sigma)$	$z_{drag}$	$1059.90^{+0.65}_{-0.60} \quad (+0.6\sigma)$
$\tau$	$0.076^{+0.031}_{-0.031} \quad (-0.0\sigma)$	$\Omega_\Lambda$	$> 0.674 \quad (-0.1\sigma)$	$r_{drag}$	$147.36^{+0.60}_{-0.60} \quad (+0.2\sigma)$
$w$	$-1.49^{+0.59}_{-0.50} \quad (+0.2\sigma)$	$\Omega_m$	$< 0.326 \quad (+0.1\sigma)$	$k_D$	$0.14062^{+0.00065}_{-0.00066} \quad (+0.1\sigma)$
$\ln(10^{10} A_s)$	$3.083^{+0.062}_{-0.062} \quad (-0.2\sigma)$	$\Omega_m h^2$	$0.1419^{+0.0026}_{-0.0026} \quad (-0.4\sigma)$	$100\theta_D$	$0.16073^{+0.00037}_{-0.00038} \quad (-0.7\sigma)$
$n_s$	$0.9686^{+0.0091}_{-0.0092} \quad (+0.7\sigma)$	$\Omega_m h^3$	$0.120^{+0.025}_{-0.028} \quad (-0.2\sigma)$	$z_{eq}$	$3376^{+62}_{-62} \quad (-0.4\sigma)$
$y_{cal}$	$1.0002^{+0.0047}_{-0.0048} \quad (-0.1\sigma)$	$\sigma_8$	$0.96^{+0.14}_{-0.17} \quad (-0.2\sigma)$	$100\theta_{eq}$	$0.818^{+0.012}_{-0.012} \quad (+0.4\sigma)$
$A_{100}^{PS}$	$243^{+40}_{-40} \quad (-0.6\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.433^{+0.039}_{-0.034} \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.0745^{+0.0029}_{-0.0038} \quad (+0.0\sigma)$
$A_{143}^{PS}$	$38^{+10}_{-20} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.645^{+0.037}_{-0.041} \quad (-0.4\sigma)$	$H(0.57)$	$91.3^{+2.2}_{-2.4} \quad (+0.3\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.051^{+0.058}_{-0.066} \quad (-0.4\sigma)$	$D_A(0.57)$	$1296^{+110}_{-82} \quad (+0.1\sigma)$
$A_{217}^{CIB}$	$45^{+10}_{-10} \quad (-2.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.527^{+0.088}_{-0.093} \quad (-0.6\sigma)$	$F_{AP}(0.57)$	$< 0.682 \quad (+0.2\sigma)$
$A_{143}^{tSZ}$	$< 6.89 \quad (-1.1\sigma)$	$z_{re}$	$9.7^{+2.6}_{-3.1} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.59^{+0.11}_{-0.13} \quad (-0.3\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.22}$	$10^9 A_s$	$2.18^{+0.14}_{-0.13} \quad (-0.2\sigma)$	$\sigma_8(0.57)$	$0.73^{+0.12}_{-0.14} \quad (-0.2\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.873^{+0.023}_{-0.023} \quad (-0.7\sigma)$	$Y_P^{BBN}$	$0.24631^{+0.00013}_{-0.00014} \quad (-5.1\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1224^{+25}_{-25} \quad (-0.9\sigma)$	$f_{2000}^{143}$	$28^{+5}_{-5} \quad (-0.5\sigma)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$D_{220}$	$5713^{+76}_{-75} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$105.7^{+3.7}_{-3.7} \quad (+0.0\sigma)$
$A_{143}^{dust}$	$1.03^{+0.36}_{-0.36}$	$D_{810}$	$2529^{+26}_{-26} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+4}_{-4} \quad (-0.6\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	$814.4^{+9.2}_{-9.2} \quad (+0.0\sigma)$	$\chi_{lowTEB}^2$	$10495.6 \quad (\nu: 1.6) \quad (-0.5\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.36}_{-0.35}$	$n_{s,0.002}$	$0.9686^{+0.0091}_{-0.0092} \quad (+0.7\sigma)$	$\chi_{CamSpec}^2$	$12951.6 \quad (\nu: 17.2)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.24498^{+0.00014}_{-0.00013} \quad (-5.2\sigma)$	$\chi_{prior}^2$	$8.9 \quad (\nu: 6.3) \quad (-1.9\sigma)$
$c_{217}$	$0.9970^{+0.0035}_{-0.0034} \quad (+0.7\sigma)$	$Age/Gyr$	$13.57^{+0.28}_{-0.20} \quad (+0.0\sigma)$	$\chi_{CMB}^2$	$23447.2 \quad (\nu: 18.0) \quad (+1572.6\sigma)$
$c_{TE}$	$1.0035^{+0.0088}_{-0.0087}$	$z_*$	$1089.78^{+0.57}_{-0.57} \quad (-0.7\sigma)$		

$$\bar{\chi}_{eff}^2 = 23456.04; \Delta\bar{\chi}_{eff}^2 = 10491.07; R - 1 = 0.01083$$

## 21.20 base\_w\_plikHM\_TT\_lowTEB\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022289	$0.02225^{+0.00043}_{-0.00042}$	$\Omega_m h^2$	0.14207	$0.1422^{+0.0035}_{-0.0034}$	$r_{\text{drag}}$	147.41	$147.40^{+0.85}_{-0.88}$
$\Omega_c h^2$	0.11914	$0.1193^{+0.0037}_{-0.0036}$	$\Omega_m h^3$	0.0966	$0.0968^{+0.0066}_{-0.0063}$	$k_D$	0.14047	$0.1404^{+0.0010}_{-0.00097}$
$100\theta_{\text{MC}}$	1.04095	$1.04093^{+0.00090}_{-0.00090}$	$\sigma_8$	0.835	$0.835^{+0.053}_{-0.049}$	$100\theta_D$	0.16090	$0.16095^{+0.00053}_{-0.00051}$
$\tau$	0.0820	$0.079^{+0.037}_{-0.037}$	$\sigma_8 \Omega_m^{0.5}$	0.4628	$0.462^{+0.020}_{-0.020}$	$z_{\text{eq}}$	3380	$3383^{+84}_{-82}$
$w$	-1.013	$-1.02^{+0.15}_{-0.15}$	$\sigma_8 \Omega_m^{0.25}$	0.6215	$0.621^{+0.030}_{-0.030}$	$k_{\text{eq}}$	0.010315	$0.01033^{+0.00026}_{-0.00025}$
$\ln(10^{10} A_s)$	3.097	$3.092^{+0.071}_{-0.073}$	$\sigma_8/h^{0.5}$	1.0124	$1.012^{+0.045}_{-0.045}$	$100\theta_{\text{eq}}$	0.8171	$0.817^{+0.016}_{-0.016}$
$n_s$	0.9677	$0.967^{+0.011}_{-0.011}$	$\langle d^2 \rangle^{1/2}$	2.498	$2.498^{+0.092}_{-0.095}$	$100\theta_{s,\text{eq}}$	0.4515	$0.4511^{+0.0081}_{-0.0081}$
$y_{\text{cal}}$	1.0002	$1.0004^{+0.0050}_{-0.0050}$	$z_{\text{re}}$	10.32	$10.0^{+3.4}_{-3.5}$	$r_{\text{drag}}/D_V(0.57)$	0.07172	$0.07167^{+0.00086}_{-0.00082}$
$A_{217}^{\text{CIB}}$	65.3	$64^{+10}_{-10}$	$10^9 A_s$	2.213	$2.20^{+0.16}_{-0.16}$	$H(0.57)$	92.99	$92.89^{+0.88}_{-0.92}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.22	—	$10^9 A_s e^{-2\tau}$	1.8777	$1.879^{+0.026}_{-0.026}$	$D_A(0.57)$	1384.6	$1385^{+23}_{-23}$
$A_{143}^{\text{tSZ}}$	6.97	$5.2^{+3.6}_{-3.7}$	$D_{40}$	1233.2	$1236^{+27}_{-27}$	$F_{\text{AP}}(0.57)$	0.6743	$0.674^{+0.014}_{-0.015}$
$A_{100}^{\text{PS}}$	250	$258^{+50}_{-50}$	$D_{220}$	5718	$5720^{+81}_{-81}$	$f\sigma_8(0.57)$	0.4856	$0.487^{+0.040}_{-0.039}$
$A_{143}^{\text{PS}}$	41.8	$43^{+20}_{-20}$	$D_{810}$	2534.1	$2534^{+27}_{-28}$	$\sigma_8(0.57)$	0.6215	$0.621^{+0.039}_{-0.037}$
$A_{143 \times 217}^{\text{PS}}$	38.9	$39^{+20}_{-20}$	$D_{1420}$	815.3	$815^{+10}_{-10}$	$f_{2000}^{143}$	29.0	$30^{+6}_{-6}$
$A_{217}^{\text{PS}}$	100.2	$97^{+20}_{-20}$	$D_{2000}$	230.77	$230.5^{+3.6}_{-3.6}$	$f_{2000}^{143 \times 217}$	31.95	$32^{+4}_{-4}$
$A^{\text{kSZ}}$	0.01	$< 8.17$	$n_{s,0.002}$	0.9677	$0.967^{+0.011}_{-0.011}$	$f_{2000}^{217}$	105.53	$105.9^{+3.9}_{-4.0}$
$A_{100}^{\text{dustTT}}$	7.42	$7.4^{+3.6}_{-3.7}$	$Y_{\text{P}}$	0.245357	$0.24534^{+0.00019}_{-0.00019}$	$\chi_{\text{lowTEB}}^2$	10496.48	$10497.3 (\nu: 2.8)$
$A_{143}^{\text{dustTT}}$	9.04	$9.0^{+3.6}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.246684	$0.24667^{+0.00019}_{-0.00019}$	$\chi_{\text{plik}}^2$	763.6	$777.0 (\nu: 15.9)$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.1^{+8.1}_{-8.1}$	$10^5 \text{D}/\text{H}$	2.607	$2.614^{+0.082}_{-0.081}$	$\chi_{6\text{DF}}^2$	0.005	$0.16 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	82.2	$82^{+10}_{-10}$	$\text{Age}/\text{Gyr}$	13.793	$13.796^{+0.074}_{-0.073}$	$\chi_{\text{MGS}}^2$	1.47	$1.7 (\nu: 0.5)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1089.95	$1090.01^{+0.74}_{-0.74}$	$\chi_{\text{DR11CMass}}^2$	2.54	$3.19 (\nu: 0.5)$
$c_{217}$	0.99589	$0.9959^{+0.0028}_{-0.0028}$	$r_*$	144.72	$144.70^{+0.84}_{-0.85}$	$\chi_{\text{DR11LOWZ}}^2$	0.48	$0.74 (\nu: 0.3)$
$H_0$	67.99	$68.1^{+3.5}_{-3.3}$	$100\theta_*$	1.04114	$1.04113^{+0.00088}_{-0.00089}$	$\chi_{\text{prior}}^2$	1.9	$7.3 (\nu: 6.3)$
$\Omega_\Lambda$	0.6926	$0.693^{+0.028}_{-0.026}$	$D_A/\text{Gpc}$	13.900	$13.898^{+0.078}_{-0.080}$	$\chi_{\text{CMB}}^2$	11260.0	$11274.4 (\nu: 15.1)$
$\Omega_m$	0.3074	$0.307^{+0.026}_{-0.028}$	$z_{\text{drag}}$	1059.70	$1059.62^{+0.90}_{-0.90}$	$\chi_{\text{BAO}}^2$	4.49	$5.7 (\nu: 1.5)$

Best-fit  $\chi_{\text{eff}}^2 = 11266.42$ ;  $\bar{\chi}_{\text{eff}}^2 = 11287.43$ ;  $R - 1 = 0.00570$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMass: 2.54 DR11LOWZ: 0.48 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.49 plik\_dx11dr2\_HM\_v18\_TT: 763.55

## 21.21 base\_w\_plikHM\_TT\_lowTEB\_BAO\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022279	$0.02226^{+0.00043}_{-0.00043}$	$\Omega_m h^3$	0.0952	$0.0953^{+0.0056}_{-0.0056}$	$100\theta_D$	0.16097	$0.16099^{+0.00054}_{-0.00051}$
$\Omega_c h^2$	0.11817	$0.1184^{+0.0034}_{-0.0034}$	$\sigma_8$	0.8110	$0.812^{+0.036}_{-0.036}$	$z_{\text{eq}}$	3356	$3360^{+76}_{-76}$
$100\theta_{\text{MC}}$	1.04107	$1.04106^{+0.00084}_{-0.00085}$	$\sigma_8 \Omega_m^{0.5}$	0.4516	$0.452^{+0.013}_{-0.013}$	$k_{\text{eq}}$	0.010244	$0.01026^{+0.00023}_{-0.00023}$
$\tau$	0.0687	$0.068^{+0.034}_{-0.033}$	$\sigma_8 \Omega_m^{0.25}$	0.6052	$0.606^{+0.018}_{-0.019}$	$100\theta_{\text{eq}}$	0.8215	$0.821^{+0.015}_{-0.014}$
$w$	-0.983	$-0.99^{+0.13}_{-0.13}$	$\sigma_8/h^{0.5}$	0.9874	$0.988^{+0.027}_{-0.027}$	$100\theta_{\text{s,eq}}$	0.4537	$0.4533^{+0.0077}_{-0.0074}$
$\ln(10^{10} A_s)$	3.067	$3.066^{+0.061}_{-0.060}$	$\langle d^2 \rangle^{1/2}$	2.444	$2.447^{+0.053}_{-0.054}$	$r_{\text{drag}}/D_V(0.57)$	0.07180	$0.07173^{+0.00084}_{-0.00083}$
$n_s$	0.9690	$0.968^{+0.011}_{-0.010}$	$z_{\text{re}}$	9.09	$8.9^{+3.0}_{-3.3}$	$H(0.57)$	93.14	$93.07^{+0.79}_{-0.83}$
$y_{\text{cal}}$	1.00003	$1.0002^{+0.0048}_{-0.0049}$	$10^9 A_s$	2.148	$2.15^{+0.14}_{-0.13}$	$D_A(0.57)$	1387.2	$1388^{+23}_{-23}$
$A_{217}^{\text{CIB}}$	67.4	$65^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8718	$1.873^{+0.024}_{-0.024}$	$F_{\text{AP}}(0.57)$	0.6766	$0.677^{+0.013}_{-0.014}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1223.5	$1227^{+23}_{-23}$	$f\sigma_8(0.57)$	0.4694	$0.471^{+0.028}_{-0.029}$
$A_{143}^{\text{tSZ}}$	7.26	$5.0^{+3.7}_{-3.8}$	$D_{220}$	5715	$5718^{+82}_{-82}$	$\sigma_8(0.57)$	0.6043	$0.605^{+0.028}_{-0.028}$
$A_{100}^{\text{PS}}$	253	$260^{+50}_{-60}$	$D_{810}$	2531.7	$2532^{+27}_{-28}$	$f_{2000}^{143}$	29.9	$30^{+6}_{-6}$
$A_{143}^{\text{PS}}$	39.0	$44^{+20}_{-20}$	$D_{1420}$	814.9	$815^{+10}_{-10}$	$f_{2000}^{143 \times 217}$	32.51	$33^{+4}_{-4}$
$A_{143 \times 217}^{\text{PS}}$	33	$38^{+20}_{-20}$	$D_{2000}$	230.21	$230.1^{+3.6}_{-3.6}$	$f_{2000}^{217}$	106.06	$106.3^{+3.9}_{-3.8}$
$A_{217}^{\text{PS}}$	97.0	$96^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9690	$0.968^{+0.011}_{-0.010}$	$\chi^2_{\text{lensing}}$	9.06	$9.9 (\nu: 1.1)$
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.245353	$0.24534^{+0.00019}_{-0.00020}$	$\chi^2_{\text{lowTEB}}$	10494.85	$10495.7 (\nu: 0.9)$
$A_{100}^{\text{dustTT}}$	7.40	$7.4^{+3.6}_{-3.6}$	$Y_{\text{P}}^{\text{BBN}}$	0.246679	$0.24667^{+0.00019}_{-0.00020}$	$\chi^2_{\text{plik}}$	766.5	$779.6 (\nu: 15.1)$
$A_{143}^{\text{dustTT}}$	9.04	$9.0^{+3.6}_{-3.6}$	$10^5 \text{D}/\text{H}$	2.608	$2.613^{+0.084}_{-0.081}$	$\chi^2_{6\text{DF}}$	0.024	$0.17 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.1^{+8.0}_{-8.0}$	$\text{Age}/\text{Gyr}$	13.805	$13.809^{+0.070}_{-0.074}$	$\chi^2_{\text{MGS}}$	1.28	$1.42 (\nu: 0.5)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$z_*$	1089.87	$1089.92^{+0.75}_{-0.74}$	$\chi^2_{\text{DR11CMAS}}$	2.24	$2.87 (\nu: 0.4)$
$c_{100}$	0.99789	$0.9979^{+0.0016}_{-0.0015}$	$r_*$	144.98	$144.94^{+0.75}_{-0.75}$	$\chi^2_{\text{DR11LOWZ}}$	0.53	$0.83 (\nu: 0.3)$
$c_{217}$	0.99597	$0.9960^{+0.0029}_{-0.0028}$	$100\theta_*$	1.04127	$1.04126^{+0.00082}_{-0.00083}$	$\chi^2_{\text{prior}}$	2.2	$7.4 (\nu: 6.4)$
$H_0$	67.46	$67.5^{+3.2}_{-3.0}$	$D_A/\text{Gpc}$	13.923	$13.920^{+0.070}_{-0.071}$	$\chi^2_{\text{CMB}}$	11270.4	$11285.1 (\nu: 15.1)$
$\Omega_\Lambda$	0.6899	$0.689^{+0.027}_{-0.026}$	$z_{\text{drag}}$	1059.59	$1059.55^{+0.89}_{-0.92}$	$\chi^2_{\text{BAO}}$	4.07	$5.3 (\nu: 1.3)$
$\Omega_m$	0.3101	$0.311^{+0.026}_{-0.027}$	$r_{\text{drag}}$	147.68	$147.65^{+0.75}_{-0.76}$			
$\Omega_m h^2$	0.14109	$0.1413^{+0.0032}_{-0.0032}$	$k_D$	0.14018	$0.14019^{+0.00087}_{-0.00088}$			

Best-fit  $\chi^2_{\text{eff}} = 11276.64$ ;  $\bar{\chi}^2_{\text{eff}} = 11297.85$ ;  $R - 1 = 0.02226$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.02 MGS: 1.28 DR11CMAS: 2.24 DR11LOWZ: 0.53 CMB - smica\_g30\_ftl\_full\_pp: 9.05 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.85 plik\_dx11dr2\_HM\_v18\_TT: 766.50



## 21.22 base\_w\_plikHM\_TTTEEE\_lowTEB\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022300	$0.02227^{+0.00031}_{-0.00030}$	$A_{143}^{\text{dust}TE}$	0.156	$0.16^{+0.11}_{-0.11}$	$r_*$	144.63	$144.60^{+0.59}_{-0.58}$
$\Omega_c h^2$	0.11944	$0.1196^{+0.0027}_{-0.0026}$	$A_{143 \times 217}^{\text{dust}TE}$	0.338	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04100	$1.04100^{+0.00062}_{-0.00060}$
$100\theta_{\text{MC}}$	1.04082	$1.04081^{+0.00063}_{-0.00061}$	$A_{217}^{\text{dust}TE}$	1.66	$1.67^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	13.893	$13.891^{+0.054}_{-0.054}$
$\tau$	0.0829	$0.080^{+0.033}_{-0.034}$	$c_{100}$	0.99825	$0.9982^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.74	$1059.68^{+0.64}_{-0.62}$
$w$	-1.021	$-1.03^{+0.12}_{-0.13}$	$c_{217}$	0.99583	$0.9960^{+0.0029}_{-0.0028}$	$r_{\text{drag}}$	147.32	$147.30^{+0.57}_{-0.57}$
$\ln(10^{10} A_s)$	3.100	$3.094^{+0.064}_{-0.066}$	$H_0$	68.07	$68.3^{+3.2}_{-3.1}$	$k_D$	0.14058	$0.14057^{+0.00062}_{-0.00062}$
$n_s$	0.9662	$0.9650^{+0.0091}_{-0.0089}$	$\Omega_\Lambda$	0.6927	$0.694^{+0.026}_{-0.025}$	$100\theta_D$	0.160854	$0.16089^{+0.00036}_{-0.00036}$
$y_{\text{cal}}$	1.00040	$1.0004^{+0.0048}_{-0.0049}$	$\Omega_m$	0.3073	$0.306^{+0.025}_{-0.026}$	$z_{\text{eq}}$	3387	$3391^{+60}_{-59}$
$A_{217}^{\text{CIB}}$	64.0	$64^{+10}_{-10}$	$\Omega_m h^2$	0.14239	$0.1425^{+0.0025}_{-0.0025}$	$k_{\text{eq}}$	0.010338	$0.01035^{+0.00018}_{-0.00018}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.36	—	$\Omega_m h^3$	0.0969	$0.0973^{+0.0055}_{-0.0050}$	$100\theta_{\text{eq}}$	0.8157	$0.815^{+0.011}_{-0.011}$
$A_{143}^{\text{tSZ}}$	6.99	$5.4^{+3.6}_{-3.8}$	$\sigma_8$	0.8390	$0.839^{+0.043}_{-0.041}$	$100\theta_{s,\text{eq}}$	0.4507	$0.4503^{+0.0058}_{-0.0058}$
$A_{100}^{\text{PS}}$	252	$260^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4651	$0.464^{+0.017}_{-0.017}$	$r_{\text{drag}}/D_V(0.57)$	0.07165	$0.07164^{+0.00080}_{-0.00078}$
$A_{143}^{\text{PS}}$	43.5	$43^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6246	$0.624^{+0.025}_{-0.025}$	$H(0.57)$	92.92	$92.84^{+0.66}_{-0.68}$
$A_{143 \times 217}^{\text{PS}}$	43.1	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0169	$1.016^{+0.037}_{-0.038}$	$D_A(0.57)$	1384.7	$1384^{+22}_{-23}$
$A_{217}^{\text{PS}}$	102.4	$98^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.511	$2.508^{+0.081}_{-0.084}$	$F_{\text{AP}}(0.57)$	0.6738	$0.673^{+0.012}_{-0.014}$
$A^{\text{kSZ}}$	0.00	$< 7.83$	$z_{\text{re}}$	10.40	$10.1^{+3.1}_{-3.2}$	$f\sigma_8(0.57)$	0.4889	$0.490^{+0.032}_{-0.030}$
$A_{100}^{\text{dust}TT}$	7.45	$7.4^{+3.7}_{-3.7}$	$10^9 A_s$	2.221	$2.21^{+0.14}_{-0.14}$	$\sigma_8(0.57)$	0.6244	$0.624^{+0.033}_{-0.032}$
$A_{143}^{\text{dust}TT}$	8.94	$8.9^{+3.6}_{-3.6}$	$10^9 A_s e^{-2\tau}$	1.8813	$1.881^{+0.023}_{-0.023}$	$f_{2000}^{143}$	28.6	$29^{+5}_{-5}$
$A_{143 \times 217}^{\text{dust}TT}$	17.9	$17.0^{+8.2}_{-8.1}$	$D_{40}$	1238.6	$1240^{+25}_{-25}$	$f_{2000}^{143 \times 217}$	31.79	$32^{+4}_{-4}$
$A_{217}^{\text{dust}TT}$	82.5	$82^{+10}_{-10}$	$D_{220}$	5730	$5729^{+76}_{-76}$	$f_{2000}^{217}$	105.35	$105.7^{+3.6}_{-3.7}$
$A_{100}^{\text{dust}EE}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{810}$	2536.5	$2535^{+26}_{-26}$	$\chi_{\text{lowTEB}}^2$	10497.05	$10497.6 (\nu: 2.5)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0492	$0.0487^{+0.0098}_{-0.0097}$	$D_{1420}$	815.7	$814.7^{+9.3}_{-9.2}$	$\chi_{\text{plik}}^2$	2431.7	$2450.5 (\nu: 23.5)$
$A_{100 \times 217}^{\text{dust}EE}$	0.100	$0.0998^{+0.064}_{-0.064}$	$D_{2000}$	230.90	$230.5^{+3.1}_{-3.1}$	$\chi_{6\text{DF}}^2$	0.005	$0.15 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1005	$0.100^{+0.013}_{-0.013}$	$n_{s,0.002}$	0.9662	$0.9650^{+0.0091}_{-0.0089}$	$\chi_{\text{MGS}}^2$	1.47	$1.7 (\nu: 0.5)$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.224^{+0.092}_{-0.092}$	$Y_P$	0.245362	$0.24535^{+0.00014}_{-0.00014}$	$\chi_{\text{DR11CMass}}^2$	2.65	$3.26 (\nu: 0.4)$
$A_{217}^{\text{dust}EE}$	0.651	$0.65^{+0.26}_{-0.25}$	$Y_P^{\text{BBN}}$	0.246689	$0.24667^{+0.00014}_{-0.00014}$	$\chi_{\text{DR11LOWZ}}^2$	0.51	$0.72 (\nu: 0.3)$
$A_{100}^{\text{dust}TE}$	0.140	$0.140^{+0.074}_{-0.074}$	$10^5 D/H$	2.605	$2.610^{+0.058}_{-0.059}$	$\chi_{\text{prior}}^2$	6.6	$19.3 (\nu: 15.2)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.056}_{-0.057}$	Age/Gyr	13.793	$13.793^{+0.064}_{-0.064}$	$\chi_{\text{CMB}}^2$	12928.8	$12948.2 (\nu: 22.5)$
$A_{100 \times 217}^{\text{dust}TE}$	0.304	$0.30^{+0.16}_{-0.16}$	$z_*$	1089.96	$1090.01^{+0.55}_{-0.55}$	$\chi_{\text{BAO}}^2$	4.64	$5.8 (\nu: 1.4)$

Best-fit  $\chi_{\text{eff}}^2 = 12940.03$ ;  $\bar{\chi}_{\text{eff}}^2 = 12973.27$ ;  $R - 1 = 0.01035$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.47 DR11CMass: 2.65 DR11LOWZ: 0.51 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10497.05 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.71

### 21.23 base\_w\_plikHM\_TTTEEE\_lowTEB\_BAO\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022286	$0.02228^{+0.00031}_{-0.00030}$	$A_{143 \times 217}^{\text{dustTE}}$	0.337	$0.34^{+0.16}_{-0.15}$	$D_A/\text{Gpc}$	13.907	$13.904^{+0.051}_{-0.054}$
$\Omega_c h^2$	0.11889	$0.1190^{+0.0027}_{-0.0024}$	$A_{217}^{\text{dustTE}}$	1.67	$1.66^{+0.52}_{-0.54}$	$z_{\text{drag}}$	1059.67	$1059.66^{+0.61}_{-0.60}$
$100\theta_{\text{MC}}$	1.04092	$1.04089^{+0.00063}_{-0.00060}$	$c_{100}$	0.99818	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.48	$147.45^{+0.53}_{-0.55}$
$\tau$	0.0653	$0.064^{+0.028}_{-0.027}$	$c_{217}$	0.99611	$0.9960^{+0.0029}_{-0.0027}$	$k_D$	0.14039	$0.14042^{+0.00059}_{-0.00061}$
$w$	-0.999	$-1.01^{+0.12}_{-0.12}$	$H_0$	67.64	$67.8^{+2.9}_{-3.0}$	$100\theta_D$	0.160909	$0.16091^{+0.00036}_{-0.00035}$
$\ln(10^{10} A_s)$	3.063	$3.060^{+0.051}_{-0.049}$	$\Omega_\Lambda$	0.6900	$0.691^{+0.025}_{-0.025}$	$z_{\text{eq}}$	3374	$3377^{+60}_{-55}$
$n_s$	0.9665	$0.9660^{+0.0089}_{-0.0087}$	$\Omega_m$	0.3100	$0.309^{+0.025}_{-0.025}$	$k_{\text{eq}}$	0.010297	$0.01031^{+0.00018}_{-0.00017}$
$y_{\text{cal}}$	1.0002	$1.0001^{+0.0052}_{-0.0050}$	$\Omega_m h^2$	0.14182	$0.1419^{+0.0025}_{-0.0023}$	$100\theta_{\text{eq}}$	0.8182	$0.818^{+0.011}_{-0.011}$
$A_{217}^{\text{CIB}}$	68.1	$65^{+10}_{-10}$	$\Omega_m h^3$	0.0959	$0.0963^{+0.0049}_{-0.0051}$	$100\theta_{s,\text{eq}}$	0.4520	$0.4517^{+0.0055}_{-0.0058}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$\sigma_8$	0.8155	$0.816^{+0.034}_{-0.033}$	$r_{\text{drag}}/D_V(0.57)$	0.07167	$0.07166^{+0.00079}_{-0.00080}$
$A_{143}^{\text{tSZ}}$	7.29	$5.3^{+3.8}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	0.4540	$0.454^{+0.012}_{-0.012}$	$H(0.57)$	93.02	$92.97^{+0.58}_{-0.65}$
$A_{100}^{\text{PS}}$	259	$262^{+60}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6085	$0.609^{+0.017}_{-0.015}$	$D_A(0.57)$	1387.1	$1387^{+23}_{-22}$
$A_{143}^{\text{PS}}$	38.8	$44^{+10}_{-20}$	$\sigma_8/h^{0.5}$	0.9915	$0.991^{+0.025}_{-0.023}$	$F_{\text{AP}}(0.57)$	0.6757	$0.675^{+0.012}_{-0.013}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.454	$2.453^{+0.051}_{-0.053}$	$f\sigma_8(0.57)$	0.4736	$0.475^{+0.026}_{-0.025}$
$A_{217}^{\text{PS}}$	96.2	$96^{+20}_{-20}$	$z_{\text{re}}$	8.77	$8.6^{+2.5}_{-2.7}$	$\sigma_8(0.57)$	0.6071	$0.608^{+0.026}_{-0.026}$
$A^{\text{kSZ}}$	0.00	$< 8.06$	$10^9 A_s$	2.139	$2.13^{+0.11}_{-0.11}$	$f_{2000}^{143}$	29.9	$30^{+5}_{-5}$
$A_{100}^{\text{dustTT}}$	7.50	$7.5^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8767	$1.877^{+0.022}_{-0.023}$	$f_{2000}^{143 \times 217}$	32.60	$33^{+4}_{-4}$
$A_{143}^{\text{dustTT}}$	9.07	$9.1^{+3.8}_{-3.6}$	$D_{40}$	1229.5	$1230^{+23}_{-23}$	$f_{2000}^{217}$	106.13	$106.1^{+3.5}_{-3.6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.1}_{-8.3}$	$D_{220}$	5726	$5725^{+75}_{-76}$	$\chi^2_{\text{lensing}}$	9.69	$10.3 (\nu: 1.6)$
$A_{217}^{\text{dustTT}}$	81.9	$81^{+10}_{-10}$	$D_{810}$	2534.2	$2533^{+26}_{-27}$	$\chi^2_{\text{lowTEB}}$	10495.24	$10495.8 (\nu: 0.6)$
$A_{100}^{\text{dustEE}}$	0.0814	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	815.1	$814.6^{+9.9}_{-9.4}$	$\chi^2_{\text{plik}}$	2435.2	$2453.9 (\nu: 24.0)$
$A_{100 \times 143}^{\text{dustEE}}$	0.0492	$0.0491^{+0.0099}_{-0.0095}$	$D_{2000}$	230.21	$230.0^{+3.3}_{-3.0}$	$\chi^2_{6\text{DF}}$	0.022	$0.15 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dustEE}}$	0.0998	$0.101^{+0.065}_{-0.065}$	$n_{s,0.002}$	0.9665	$0.9660^{+0.0089}_{-0.0087}$	$\chi^2_{\text{MGS}}$	1.28	$1.51 (\nu: 0.4)$
$A_{143}^{\text{dustEE}}$	0.1004	$0.100^{+0.013}_{-0.013}$	$Y_P$	0.245356	$0.24535^{+0.00014}_{-0.00014}$	$\chi^2_{\text{DR11CMass}}$	2.44	$3.04 (\nu: 0.4)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.223^{+0.091}_{-0.094}$	$Y_P^{\text{BBN}}$	0.246682	$0.24668^{+0.00014}_{-0.00014}$	$\chi^2_{\text{DR11LOWZ}}$	0.60	$0.81 (\nu: 0.3)$
$A_{217}^{\text{dustEE}}$	0.649	$0.65^{+0.26}_{-0.25}$	$10^5 D/H$	2.607	$2.608^{+0.058}_{-0.059}$	$\chi^2_{\text{prior}}$	7.1	$19.6 (\nu: 14.7)$
$A_{100}^{\text{dustTE}}$	0.140	$0.140^{+0.073}_{-0.071}$	$\text{Age/Gyr}$	13.802	$13.801^{+0.067}_{-0.064}$	$\chi^2_{\text{CMB}}$	12940.2	$12960.0 (\nu: 23.2)$
$A_{100 \times 143}^{\text{dustTE}}$	0.130	$0.131^{+0.056}_{-0.056}$	$z_*$	1089.93	$1089.94^{+0.55}_{-0.57}$	$\chi^2_{\text{BAO}}$	4.34	$5.5 (\nu: 1.4)$
$A_{100 \times 217}^{\text{dustTE}}$	0.302	$0.30^{+0.17}_{-0.17}$	$r_*$	144.78	$144.75^{+0.54}_{-0.56}$			
$A_{143}^{\text{dustTE}}$	0.155	$0.16^{+0.11}_{-0.11}$	$100\theta_*$	1.04111	$1.04109^{+0.00062}_{-0.00059}$			

Best-fit  $\chi^2_{\text{eff}} = 12951.59$ ;  $\bar{\chi}^2_{\text{eff}} = 12985.07$ ;  $R - 1 = 0.03760$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.02 MGS: 1.28 DR11CMass: 2.44 DR11LOWZ: 0.60 CMB - smica\_g30\_ft1\_full\_pp: 9.69 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.24 plik\_dx11dr2\_HM\_v18\_TTT

## 21.24 base\_w\_plikHM\_TT\_lowTEB\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022271	$0.02226^{+0.00042}_{-0.00041}$	$\Omega_m h^2$	0.14205	$0.1422^{+0.0032}_{-0.0032}$	$100\theta_D$	0.16093	$0.16093^{+0.00051}_{-0.00051}$
$\Omega_c h^2$	0.11914	$0.1193^{+0.0033}_{-0.0034}$	$\Omega_m h^3$	0.09697	$0.0970^{+0.0041}_{-0.0040}$	$z_{\text{eq}}$	3379	$3383^{+75}_{-77}$
$100\theta_{\text{MC}}$	1.04095	$1.04093^{+0.00085}_{-0.00087}$	$\sigma_8$	0.8363	$0.836^{+0.039}_{-0.039}$	$k_{\text{eq}}$	0.010314	$0.01033^{+0.00023}_{-0.00024}$
$\tau$	0.0805	$0.080^{+0.036}_{-0.035}$	$\sigma_8 \Omega_m^{0.5}$	0.4617	$0.462^{+0.020}_{-0.021}$	$100\theta_{\text{eq}}$	0.8172	$0.817^{+0.015}_{-0.014}$
$w$	-1.023	$-1.023^{+0.091}_{-0.096}$	$\sigma_8 \Omega_m^{0.25}$	0.6214	$0.622^{+0.026}_{-0.027}$	$100\theta_{\text{s,eq}}$	0.4515	$0.4512^{+0.0076}_{-0.0073}$
$\ln(10^{10} A_s)$	3.094	$3.092^{+0.070}_{-0.069}$	$\sigma_8/h^{0.5}$	1.0122	$1.012^{+0.040}_{-0.040}$	$r_{\text{drag}}/D_V(0.57)$	0.07179	$0.07172^{+0.00084}_{-0.00082}$
$n_s$	0.9674	$0.966^{+0.010}_{-0.010}$	$\langle d^2 \rangle^{1/2}$	2.497	$2.498^{+0.088}_{-0.090}$	$H(0.57)$	92.96	$92.92^{+0.75}_{-0.79}$
$y_{\text{cal}}$	1.00028	$1.0004^{+0.0049}_{-0.0050}$	$z_{\text{re}}$	10.19	$10.0^{+3.1}_{-3.4}$	$D_A(0.57)$	1382.5	$1384^{+17}_{-17}$
$\alpha_{JLA}$	0.1415	$0.141^{+0.013}_{-0.013}$	$10^9 A_s$	2.206	$2.20^{+0.16}_{-0.15}$	$F_{\text{AP}}(0.57)$	0.6731	$0.6734^{+0.0088}_{-0.0087}$
$\beta_{JLA}$	3.103	$3.11^{+0.16}_{-0.16}$	$10^9 A_s e^{-2\tau}$	1.8775	$1.878^{+0.025}_{-0.025}$	$f\sigma_8(0.57)$	0.4869	$0.487^{+0.029}_{-0.028}$
$A_{217}^{\text{CIB}}$	66.5	$64^{+10}_{-10}$	$D_{40}$	1232.8	$1236^{+27}_{-27}$	$\sigma_8(0.57)$	0.6229	$0.622^{+0.029}_{-0.029}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.04	—	$D_{220}$	5717	$5720^{+80}_{-79}$	$f_{2000}^{143}$	29.3	$30^{+6}_{-6}$
$A_{143}^{\text{tSZ}}$	7.12	$5.1^{+3.6}_{-3.8}$	$D_{810}$	2533.7	$2534^{+27}_{-27}$	$f_{2000}^{143 \times 217}$	31.99	$32^{+4}_{-4}$
$A_{100}^{\text{PS}}$	252	$258^{+50}_{-50}$	$D_{1420}$	815.0	$815^{+10}_{-9.9}$	$f_{2000}^{217}$	105.65	$105.9^{+3.9}_{-3.8}$
$A_{143}^{\text{PS}}$	38.8	$43^{+20}_{-20}$	$D_{2000}$	230.61	$230.5^{+3.6}_{-3.5}$	$\chi_{\text{lowTEB}}^2$	10496.30	$10497.3 (\nu: 2.8)$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9674	$0.966^{+0.010}_{-0.010}$	$\chi_{\text{plik}}^2$	763.5	$776.8 (\nu: 15.6)$
$A_{217}^{\text{PS}}$	97.9	$97^{+20}_{-20}$	$Y_{\text{P}}$	0.245349	$0.24534^{+0.00019}_{-0.00019}$	$\chi_{\text{H070p6}}^2$	0.51	$0.63 (\nu: 0.1)$
$A^{\text{kSZ}}$	0.01	$< 8.29$	$Y_{\text{P}}^{\text{BBN}}$	0.246676	$0.24667^{+0.00019}_{-0.00019}$	$\chi_{\text{JLA}}^2$	695.20	$697.8 (\nu: 2.4)$
$A_{100}^{\text{dustTT}}$	7.38	$7.4^{+3.7}_{-3.8}$	$10^5 \text{D}/\text{H}$	2.610	$2.612^{+0.079}_{-0.079}$	$\chi_{6\text{DF}}^2$	0.000	$0.070 (\nu: 0.0)$
$A_{143}^{\text{dustTT}}$	9.00	$9.0^{+3.6}_{-3.5}$	$\text{Age}/\text{Gyr}$	13.789	$13.792^{+0.061}_{-0.060}$	$\chi_{\text{MGS}}^2$	1.68	$1.68 (\nu: 0.3)$
$A_{143 \times 217}^{\text{dustTT}}$	17.3	$17.0^{+8.2}_{-8.1}$	$z_*$	1089.97	$1090.00^{+0.70}_{-0.71}$	$\chi_{\text{DR11CMAS}}^2$	2.62	$3.08 (\nu: 0.3)$
$A_{217}^{\text{dustTT}}$	81.5	$82^{+10}_{-10}$	$r_*$	144.73	$144.70^{+0.79}_{-0.77}$	$\chi_{\text{DR11LOWZ}}^2$	0.35	$0.57 (\nu: 0.1)$
$c_{100}$	0.99788	$0.9979^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04114	$1.04113^{+0.00084}_{-0.00086}$	$\chi_{\text{prior}}^2$	2.1	$7.3 (\nu: 6.3)$
$c_{217}$	0.99583	$0.9959^{+0.0029}_{-0.0028}$	$D_A/\text{Gpc}$	13.901	$13.898^{+0.074}_{-0.072}$	$\chi_{\text{CMB}}^2$	11259.8	$11274.1 (\nu: 14.7)$
$H_0$	68.26	$68.2^{+2.1}_{-2.0}$	$z_{\text{drag}}$	1059.63	$1059.64^{+0.91}_{-0.86}$	$\chi_{\text{BAO}}^2$	4.65	$5.4 (\nu: 0.7)$
$\Omega_\Lambda$	0.6952	$0.694^{+0.018}_{-0.018}$	$r_{\text{drag}}$	147.43	$147.40^{+0.81}_{-0.79}$			
$\Omega_m$	0.3048	$0.306^{+0.018}_{-0.018}$	$k_D$	0.14043	$0.14046^{+0.00092}_{-0.00093}$			

Best-fit  $\chi_{\text{eff}}^2 = 11962.18$ ;  $\bar{\chi}_{\text{eff}}^2 = 11985.16$ ;  $R - 1 = 0.00509$   
 $\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.68 DR11CMAS: 2.62 DR11LOWZ: 0.35 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.30 plik\_dx11dr2\_HM\_v18\_TT: 763.46  
Hubble - H070p6: 0.51 SN - JLA December\_2013: 695.20

## 21.25 base\_w\_plikHM\_TT\_lowTEB\_BAO\_H070p6\_JLA\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022285	$0.02226^{+0.00042}_{-0.00040}$	$\Omega_m h^2$	0.14137	$0.1414^{+0.0029}_{-0.0031}$	$100\theta_D$	0.16094	$0.16098^{+0.00049}_{-0.00051}$
$\Omega_c h^2$	0.11844	$0.1185^{+0.0031}_{-0.0032}$	$\Omega_m h^3$	0.09614	$0.0961^{+0.0040}_{-0.0038}$	$z_{\text{eq}}$	3363	$3364^{+69}_{-73}$
$100\theta_{\text{MC}}$	1.04103	$1.04104^{+0.00082}_{-0.00084}$	$\sigma_8$	0.8169	$0.817^{+0.027}_{-0.026}$	$k_{\text{eq}}$	0.010264	$0.01027^{+0.00021}_{-0.00022}$
$\tau$	0.0672	$0.066^{+0.032}_{-0.029}$	$\sigma_8 \Omega_m^{0.5}$	0.4517	$0.452^{+0.013}_{-0.014}$	$100\theta_{\text{eq}}$	0.8202	$0.820^{+0.014}_{-0.013}$
$w$	-1.004	$-1.006^{+0.085}_{-0.091}$	$\sigma_8 \Omega_m^{0.25}$	0.6074	$0.607^{+0.016}_{-0.015}$	$100\theta_{\text{s,eq}}$	0.4531	$0.4530^{+0.0073}_{-0.0068}$
$\ln(10^{10} A_s)$	3.064	$3.063^{+0.057}_{-0.053}$	$\sigma_8/h^{0.5}$	0.9906	$0.990^{+0.024}_{-0.023}$	$r_{\text{drag}}/D_V(0.57)$	0.07188	$0.07185^{+0.00081}_{-0.00077}$
$n_s$	0.9684	$0.968^{+0.011}_{-0.010}$	$\langle d^2 \rangle^{1/2}$	2.448	$2.449^{+0.052}_{-0.052}$	$H(0.57)$	93.09	$93.05^{+0.71}_{-0.73}$
$y_{\text{cal}}$	0.99999	$1.0001^{+0.0047}_{-0.0048}$	$z_{\text{re}}$	8.94	$8.8^{+2.8}_{-2.9}$	$D_A(0.57)$	1383.2	$1384^{+17}_{-18}$
$\alpha_{JLA}$	0.1414	$0.141^{+0.013}_{-0.013}$	$10^9 A_s$	2.142	$2.14^{+0.12}_{-0.11}$	$F_{\text{AP}}(0.57)$	0.6743	$0.6744^{+0.0086}_{-0.0089}$
$\beta_{JLA}$	3.099	$3.10^{+0.16}_{-0.16}$	$10^9 A_s e^{-2\tau}$	1.8729	$1.874^{+0.023}_{-0.024}$	$f\sigma_8(0.57)$	0.4739	$0.474^{+0.021}_{-0.020}$
$A_{217}^{\text{CIB}}$	67.5	$65^{+10}_{-10}$	$D_{40}$	1224.1	$1226^{+23}_{-23}$	$\sigma_8(0.57)$	0.6089	$0.609^{+0.020}_{-0.019}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$D_{220}$	5715	$5717^{+80}_{-79}$	$f_{2000}^{143}$	29.9	$30^{+5}_{-6}$
$A_{143}^{\text{tSZ}}$	7.11	$5.1^{+3.7}_{-3.9}$	$D_{810}$	2531.8	$2532^{+26}_{-27}$	$f_{2000}^{143 \times 217}$	32.53	$33^{+4}_{-4}$
$A_{100}^{\text{PS}}$	255	$260^{+50}_{-50}$	$D_{1420}$	814.9	$814^{+10}_{-9.8}$	$f_{2000}^{217}$	106.04	$106.3^{+3.7}_{-3.8}$
$A_{143}^{\text{PS}}$	39.4	$44^{+10}_{-20}$	$D_{2000}$	230.22	$230.0^{+3.6}_{-3.4}$	$\chi^2_{\text{lensing}}$	9.25	$9.9 (\nu: 1.2)$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9684	$0.968^{+0.011}_{-0.010}$	$\chi^2_{\text{lowTEB}}$	10494.85	$10495.5 (\nu: 0.7)$
$A_{217}^{\text{PS}}$	97.0	$96^{+20}_{-20}$	$Y_{\text{P}}$	0.245356	$0.24534^{+0.00019}_{-0.00018}$	$\chi^2_{\text{plik}}$	766.3	$779.2 (\nu: 15.0)$
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}^{\text{BBN}}$	0.246682	$0.24667^{+0.00019}_{-0.00018}$	$\chi^2_{\text{H070p6}}$	0.62	$0.71 (\nu: 0.1)$
$A_{100}^{\text{dustTT}}$	7.51	$7.4^{+3.5}_{-3.7}$	$10^5 D/H$	2.607	$2.613^{+0.077}_{-0.078}$	$\chi^2_{\text{JLA}}$	695.17	$697.7 (\nu: 2.3)$
$A_{143}^{\text{dustTT}}$	9.10	$9.1^{+3.5}_{-3.5}$	$\text{Age/Gyr}$	13.793	$13.796^{+0.060}_{-0.061}$	$\chi^2_{6\text{DF}}$	0.001	$0.072 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.3}_{-8.2}$	$z_*$	1089.89	$1089.93^{+0.68}_{-0.71}$	$\chi^2_{\text{MGS}}$	1.61	$1.68 (\nu: 0.3)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$r_*$	144.90	$144.90^{+0.76}_{-0.75}$	$\chi^2_{\text{DR11CMass}}$	2.46	$2.90 (\nu: 0.3)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0016}$	$100\theta_*$	1.04123	$1.04123^{+0.00080}_{-0.00083}$	$\chi^2_{\text{DR11LOWZ}}$	0.33	$0.51 (\nu: 0.1)$
$c_{217}$	0.99601	$0.9960^{+0.0029}_{-0.0029}$	$D_A/\text{Gpc}$	13.916	$13.916^{+0.071}_{-0.066}$	$\chi^2_{\text{prior}}$	2.1	$7.4 (\nu: 6.5)$
$H_0$	68.00	$68.0^{+2.1}_{-2.0}$	$z_{\text{drag}}$	1059.63	$1059.57^{+0.86}_{-0.86}$	$\chi^2_{\text{CMB}}$	11270.4	$11284.7 (\nu: 14.8)$
$\Omega_\Lambda$	0.6943	$0.694^{+0.018}_{-0.018}$	$r_{\text{drag}}$	147.60	$147.61^{+0.78}_{-0.72}$	$\chi^2_{\text{BAO}}$	4.41	$5.2 (\nu: 0.8)$
$\Omega_m$	0.3057	$0.306^{+0.018}_{-0.018}$	$k_D$	0.14027	$0.14023^{+0.00085}_{-0.00089}$			

Best-fit  $\chi^2_{\text{eff}} = 11972.61$ ;  $\bar{\chi}^2_{\text{eff}} = 11995.62$ ;  $R - 1 = 0.02377$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMass: 2.46 DR11LOWZ: 0.33 CMB - smica\_g30\_ft1\_full\_pp: 9.25 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.85 plik\_dx11dr2\_HM\_v18\_TT: 766.27 Hubble - H070p6: 0.62 SN - JLA December\_2013: 695.17

## 21.26 base\_w\_plikHM\_TTTEEE\_lowTEB\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022303	$0.02227^{+0.00029}_{-0.00029}$	$A_{143}^{\text{dust}TE}$	0.155	$0.15^{+0.11}_{-0.10}$	$D_A/\text{Gpc}$	13.894	$13.893^{+0.053}_{-0.052}$
$\Omega_c h^2$	0.11940	$0.1195^{+0.0025}_{-0.0025}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.16}_{-0.16}$	$z_{\text{drag}}$	1059.74	$1059.68^{+0.60}_{-0.58}$
$100\theta_{\text{MC}}$	1.04083	$1.04081^{+0.00061}_{-0.00061}$	$A_{217}^{\text{dust}TE}$	1.66	$1.67^{+0.50}_{-0.50}$	$r_{\text{drag}}$	147.32	$147.32^{+0.56}_{-0.56}$
$\tau$	0.0836	$0.080^{+0.033}_{-0.034}$	$c_{100}$	0.99826	$0.9982^{+0.0015}_{-0.0015}$	$k_D$	0.14057	$0.14055^{+0.00062}_{-0.00060}$
$w$	-1.023	$-1.030^{+0.078}_{-0.082}$	$c_{217}$	0.99584	$0.9960^{+0.0028}_{-0.0029}$	$100\theta_D$	0.160856	$0.16089^{+0.00036}_{-0.00035}$
$\ln(10^{10} A_s)$	3.102	$3.094^{+0.064}_{-0.065}$	$H_0$	68.16	$68.3^{+2.0}_{-1.9}$	$z_{\text{eq}}$	3386	$3389^{+56}_{-56}$
$n_s$	0.9666	$0.9652^{+0.0086}_{-0.0085}$	$\Omega_\Lambda$	0.6936	$0.694^{+0.017}_{-0.018}$	$k_{\text{eq}}$	0.010335	$0.01034^{+0.00017}_{-0.00017}$
$y_{\text{cal}}$	1.00043	$1.0004^{+0.0048}_{-0.0048}$	$\Omega_m$	0.3064	$0.306^{+0.018}_{-0.017}$	$100\theta_{\text{eq}}$	0.8159	$0.815^{+0.011}_{-0.010}$
$\alpha_{JLA}$	0.1413	$0.141^{+0.013}_{-0.013}$	$\Omega_m h^2$	0.14235	$0.1425^{+0.0024}_{-0.0023}$	$100\theta_{s,\text{eq}}$	0.4508	$0.4505^{+0.0055}_{-0.0054}$
$\beta_{JLA}$	3.103	$3.11^{+0.16}_{-0.15}$	$\Omega_m h^3$	0.09703	$0.0973^{+0.0035}_{-0.0033}$	$r_{\text{drag}}/D_V(0.57)$	0.07169	$0.07168^{+0.00070}_{-0.00069}$
$A_{217}^{\text{CIB}}$	63.9	$64^{+10}_{-10}$	$\sigma_8$	0.8402	$0.839^{+0.034}_{-0.034}$	$H(0.57)$	92.93	$92.87^{+0.55}_{-0.58}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.41	—	$\sigma_8 \Omega_m^{0.5}$	0.4651	$0.464^{+0.017}_{-0.017}$	$D_A(0.57)$	1383.8	$1384^{+16}_{-16}$
$A_{143}^{\text{tSZ}}$	6.96	$5.4^{+3.6}_{-3.8}$	$\sigma_8 \Omega_m^{0.25}$	0.6251	$0.624^{+0.023}_{-0.022}$	$F_{\text{AP}}(0.57)$	0.6735	$0.6729^{+0.0082}_{-0.0083}$
$A_{100}^{\text{PS}}$	253	$259^{+50}_{-50}$	$\sigma_8/h^{0.5}$	1.0176	$1.015^{+0.035}_{-0.034}$	$f\sigma_8(0.57)$	0.4896	$0.489^{+0.024}_{-0.023}$
$A_{143}^{\text{PS}}$	44.2	$43^{+10}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.512	$2.507^{+0.079}_{-0.078}$	$\sigma_8(0.57)$	0.6254	$0.624^{+0.026}_{-0.026}$
$A_{143 \times 217}^{\text{PS}}$	44.4	$40^{+20}_{-20}$	$z_{\text{re}}$	10.46	$10.1^{+3.0}_{-3.1}$	$f_{2000}^{143}$	28.5	$29^{+5}_{-5}$
$A_{217}^{\text{PS}}$	102.5	$98^{+20}_{-20}$	$10^9 A_s$	2.224	$2.21^{+0.14}_{-0.14}$	$f_{2000}^{143 \times 217}$	31.74	$32^{+4}_{-4}$
$A^{\text{kSZ}}$	0.00	$< 7.78$	$10^9 A_s e^{-2\tau}$	1.8814	$1.881^{+0.022}_{-0.022}$	$f_{2000}^{217}$	105.23	$105.7^{+3.7}_{-3.7}$
$A_{100}^{\text{dust}TT}$	7.40	$7.4^{+3.7}_{-3.6}$	$D_{40}$	1238.3	$1240^{+24}_{-25}$	$\chi_{\text{lowTEB}}^2$	10497.06	$10497.6 (\nu: 2.4)$
$A_{143}^{\text{dust}TT}$	8.97	$8.9^{+3.6}_{-3.6}$	$D_{220}$	5729	$5730^{+74}_{-75}$	$\chi_{\text{plik}}^2$	2431.7	$2450.3 (\nu: 22.4)$
$A_{143 \times 217}^{\text{dust}TT}$	18.0	$17.0^{+8.1}_{-8.2}$	$D_{810}$	2536.9	$2535^{+26}_{-26}$	$\chi_{\text{H070p6}}^2$	0.55	$0.59 (\nu: 0.1)$
$A_{217}^{\text{dust}TT}$	82.5	$82^{+10}_{-10}$	$D_{1420}$	815.9	$814.8^{+9.2}_{-9.2}$	$\chi_{\text{JLA}}^2$	695.21	$697.7 (\nu: 2.3)$
$A_{100}^{\text{dust}EE}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{2000}$	231.00	$230.5^{+3.1}_{-3.1}$	$\chi_{6\text{DF}}^2$	0.002	$0.066 (\nu: 0.0)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0489	$0.0489^{+0.0098}_{-0.0098}$	$n_{s,0.002}$	0.9666	$0.9652^{+0.0086}_{-0.0085}$	$\chi_{\text{MGS}}^2$	1.54	$1.69 (\nu: 0.2)$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.100^{+0.064}_{-0.063}$	$Y_P$	0.245363	$0.24535^{+0.00013}_{-0.00014}$	$\chi_{\text{DR11CMass}}^2$	2.65	$3.07 (\nu: 0.2)$
$A_{143}^{\text{dust}EE}$	0.1005	$0.100^{+0.014}_{-0.013}$	$Y_P^{\text{BBN}}$	0.246690	$0.24668^{+0.00013}_{-0.00014}$	$\chi_{\text{DR11LOWZ}}^2$	0.46	$0.57 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.224^{+0.092}_{-0.091}$	$10^5 D/H$	2.604	$2.610^{+0.056}_{-0.054}$	$\chi_{\text{prior}}^2$	6.6	$19.2 (\nu: 14.5)$
$A_{217}^{\text{dust}EE}$	0.648	$0.65^{+0.25}_{-0.25}$	$\text{Age/Gyr}$	13.7904	$13.791^{+0.050}_{-0.049}$	$\chi_{\text{CMB}}^2$	12928.8	$12947.9 (\nu: 21.5)$
$A_{100}^{\text{dust}TE}$	0.140	$0.141^{+0.074}_{-0.075}$	$z_*$	1089.95	$1090.00^{+0.52}_{-0.51}$	$\chi_{\text{BAO}}^2$	4.65	$5.4 (\nu: 0.5)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.131^{+0.057}_{-0.057}$	$r_*$	144.64	$144.62^{+0.56}_{-0.56}$			
$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.16}_{-0.17}$	$100\theta_*$	1.04102	$1.04100^{+0.00060}_{-0.00060}$			

Best-fit  $\chi_{\text{eff}}^2 = 13635.80$ ;  $\bar{\chi}_{\text{eff}}^2 = 13670.82$ ;  $R - 1 = 0.00718$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.54 DR11CMass: 2.65 DR11LOWZ: 0.46 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10497.06 plik\_dx11dr2\_HM\_v18\_TTTEEE:  
2431.72 Hubble - H070p6: 0.55 SN - JLA December\_2013: 695.21

21.27 base\_w\_plikHM\_TTTEEE\_lowTEB\_BAO\_H070p6\_JLA\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022285	$0.02227^{+0.00027}_{-0.00029}$	$A_{143}^{\text{dust}TE}$	0.155	$0.15^{+0.11}_{-0.11}$	$D_A/\text{Gpc}$	13.9047	$13.903^{+0.050}_{-0.050}$
$\Omega_c h^2$	0.11899	$0.1191^{+0.0024}_{-0.0023}$	$A_{143 \times 217}^{\text{dust}TE}$	0.337	$0.34^{+0.16}_{-0.16}$	$z_{\text{drag}}$	1059.67	$1059.63^{+0.57}_{-0.61}$
$100\theta_{\text{MC}}$	1.04087	$1.04088^{+0.00059}_{-0.00062}$	$A_{217}^{\text{dust}TE}$	1.668	$1.66^{+0.48}_{-0.50}$	$r_{\text{drag}}$	147.45	$147.44^{+0.53}_{-0.53}$
$\tau$	0.0640	$0.063^{+0.026}_{-0.026}$	$c_{100}$	0.99816	$0.9981^{+0.0016}_{-0.0015}$	$k_D$	0.14042	$0.14042^{+0.00060}_{-0.00058}$
$w$	-1.017	$-1.019^{+0.075}_{-0.080}$	$c_{217}$	0.99610	$0.9961^{+0.0028}_{-0.0027}$	$100\theta_D$	0.160901	$0.16092^{+0.00035}_{-0.00034}$
$\ln(10^{10} A_s)$	3.0602	$3.058^{+0.048}_{-0.047}$	$H_0$	68.15	$68.1^{+2.1}_{-1.9}$	$z_{\text{eq}}$	3376	$3379^{+54}_{-52}$
$n_s$	0.9662	$0.9656^{+0.0082}_{-0.0084}$	$\Omega_\Lambda$	0.6944	$0.694^{+0.018}_{-0.018}$	$k_{\text{eq}}$	0.010304	$0.01031^{+0.00017}_{-0.00016}$
$y_{\text{cal}}$	1.00008	$1.0001^{+0.0049}_{-0.0049}$	$\Omega_m$	0.3056	$0.306^{+0.018}_{-0.018}$	$100\theta_{\text{eq}}$	0.8177	$0.817^{+0.010}_{-0.010}$
$\alpha_{JLA}$	0.1414	$0.141^{+0.014}_{-0.013}$	$\Omega_m h^2$	0.14192	$0.1420^{+0.0023}_{-0.0022}$	$100\theta_{s,\text{eq}}$	0.4518	$0.4515^{+0.0051}_{-0.0052}$
$\beta_{JLA}$	3.102	$3.11^{+0.16}_{-0.15}$	$\Omega_m h^3$	0.09671	$0.0968^{+0.0035}_{-0.0033}$	$r_{\text{drag}}/D_V(0.57)$	0.07178	$0.07174^{+0.00069}_{-0.00071}$
$A_{217}^{\text{CIB}}$	67.9	$65^{+10}_{-10}$	$\sigma_8$	0.8199	$0.820^{+0.025}_{-0.024}$	$H(0.57)$	92.97	$92.94^{+0.52}_{-0.56}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.02	—	$\sigma_8 \Omega_m^{0.5}$	0.4533	$0.453^{+0.011}_{-0.012}$	$D_A(0.57)$	1383.3	$1384^{+17}_{-16}$
$A_{143}^{\text{tSZ}}$	7.26	$5.3^{+3.6}_{-3.9}$	$\sigma_8 \Omega_m^{0.25}$	0.6096	$0.610^{+0.014}_{-0.014}$	$F_{\text{AP}}(0.57)$	0.6736	$0.6736^{+0.0082}_{-0.0084}$
$A_{100}^{\text{PS}}$	257	$262^{+50}_{-60}$	$\sigma_8/h^{0.5}$	0.9932	$0.993^{+0.022}_{-0.022}$	$f\sigma_8(0.57)$	0.4770	$0.477^{+0.018}_{-0.018}$
$A_{143}^{\text{PS}}$	38.9	$44^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4557	$2.456^{+0.048}_{-0.050}$	$\sigma_8(0.57)$	0.6107	$0.610^{+0.020}_{-0.018}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$z_{\text{re}}$	8.64	$8.5^{+2.4}_{-2.6}$	$f_{2000}^{143}$	29.8	$30^{+5}_{-5}$
$A_{217}^{\text{PS}}$	96.5	$96^{+20}_{-20}$	$10^9 A_s$	2.133	$2.13^{+0.10}_{-0.099}$	$f_{2000}^{143 \times 217}$	32.53	$33^{+4}_{-4}$
$A^{\text{kSZ}}$	0.0	—	$10^9 A_s e^{-2\tau}$	1.8770	$1.878^{+0.022}_{-0.021}$	$f_{2000}^{217}$	106.06	$106.2^{+3.6}_{-3.7}$
$A_{100}^{\text{dust}TT}$	7.48	$7.5^{+3.6}_{-3.6}$	$D_{40}$	1229.5	$1231^{+22}_{-21}$	$\chi^2_{\text{lensing}}$	9.79	$10.3 (\nu: 1.6)$
$A_{143}^{\text{dust}TT}$	9.05	$9.1^{+3.4}_{-3.4}$	$D_{220}$	5726	$5726^{+74}_{-75}$	$\chi^2_{\text{lowTEB}}$	10495.22	$10495.8 (\nu: 0.6)$
$A_{143 \times 217}^{\text{dust}TT}$	17.7	$17.4^{+8.1}_{-8.0}$	$D_{810}$	2533.9	$2534^{+26}_{-26}$	$\chi^2_{\text{plik}}$	2435.0	$2454 (\nu: 99.2)$
$A_{217}^{\text{dust}TT}$	81.8	$82^{+10}_{-10}$	$D_{1420}$	814.9	$814.6^{+9.4}_{-9.1}$	$\chi^2_{\text{H070p6}}$	0.56	$0.65 (\nu: 0.1)$
$A_{100}^{\text{dust}EE}$	0.0815	$0.081^{+0.012}_{-0.011}$	$D_{2000}$	230.15	$230.0^{+3.0}_{-3.0}$	$\chi^2_{\text{JLA}}$	695.18	$697.6 (\nu: 2.3)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0489	$0.0490^{+0.0099}_{-0.0098}$	$n_{s,0.002}$	0.9662	$0.9656^{+0.0082}_{-0.0084}$	$\chi^2_{6\text{DF}}$	0.001	$0.068 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.0996	$0.100^{+0.065}_{-0.063}$	$Y_P$	0.245356	$0.24535^{+0.00012}_{-0.00013}$	$\chi^2_{\text{MGS}}$	1.61	$1.66 (\nu: 0.2)$
$A_{143}^{\text{dust}EE}$	0.1005	$0.100^{+0.014}_{-0.014}$	$Y_P^{\text{BBN}}$	0.246682	$0.24667^{+0.00012}_{-0.00013}$	$\chi^2_{\text{DR11CMass}}$	2.57	$2.94 (\nu: 0.2)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.225^{+0.091}_{-0.092}$	$10^5 D/H$	2.607	$2.611^{+0.055}_{-0.052}$	$\chi^2_{\text{DR11LOWZ}}$	0.38	$0.56 (\nu: 0.1)$
$A_{217}^{\text{dust}EE}$	0.655	$0.65^{+0.25}_{-0.25}$	$\text{Age/Gyr}$	13.792	$13.794^{+0.052}_{-0.051}$	$\chi^2_{\text{prior}}$	7.1	$19.3 (\nu: 16.4)$
$A_{100}^{\text{dust}TE}$	0.142	$0.141^{+0.074}_{-0.076}$	$z_*$	1089.94	$1089.97^{+0.51}_{-0.50}$	$\chi^2_{\text{CMB}}$	12940.0	$12960 (\nu: 98.1)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.131^{+0.056}_{-0.055}$	$r_*$	144.76	$144.74^{+0.53}_{-0.53}$	$\chi^2_{\text{BAO}}$	4.57	$5.2 (\nu: 0.5)$
$A_{100 \times 217}^{\text{dust}TE}$	0.303	$0.30^{+0.16}_{-0.16}$	$100\theta_*$	1.04107	$1.04107^{+0.00059}_{-0.00061}$			

Best-fit  $\chi^2_{\text{eff}} = 13647.43$ ;  $\bar{\chi}^2_{\text{eff}} = 13682.56$ ;  $R - 1 = 0.02987$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMASS: 2.57 DR11LOWZ: 0.38 CMB - smica\_g30\_ftl\_full\_pp: 9.79 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.22 plik\_dx11dr2\_HM\_v18\_TT+  
2435.01 Hubble - H070p6: 0.56 SN - JLA December\_2013: 695.18



## 22 w+wa

### 22.1 base\_w\_wa\_plikHM\_TT\_lowTEB\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022247	$0.02222^{+0.00042}_{-0.00043}$	$\Omega_m h^2$	0.14280	$0.1430^{+0.0037}_{-0.0037}$	$k_D$	0.14060	$0.14061^{+0.00096}_{-0.00098}$
$\Omega_c h^2$	0.11990	$0.1202^{+0.0039}_{-0.0039}$	$\Omega_m h^3$	0.0913	$0.0915^{+0.0086}_{-0.0081}$	$100\theta_D$	0.16092	$0.16096^{+0.00052}_{-0.00050}$
$100\theta_{MC}$	1.04085	$1.04081^{+0.00089}_{-0.00091}$	$\sigma_8$	0.803	$0.804^{+0.061}_{-0.055}$	$z_{eq}$	3397	$3403^{+90}_{-89}$
$\tau$	0.0754	$0.075^{+0.037}_{-0.037}$	$\sigma_8 \Omega_m^{0.5}$	0.4744	$0.476^{+0.025}_{-0.026}$	$k_{eq}$	0.010368	$0.01039^{+0.00027}_{-0.00027}$
$w$	-0.53	$-0.50^{+0.55}_{-0.59}$	$\sigma_8 \Omega_m^{0.25}$	0.6170	$0.618^{+0.030}_{-0.030}$	$100\theta_{eq}$	0.8138	$0.813^{+0.017}_{-0.016}$
$w_a$	-1.35	$< -0.0453$	$\sigma_8/h^{0.5}$	1.0037	$1.006^{+0.046}_{-0.045}$	$100\theta_{s,eq}$	0.4498	$0.4492^{+0.0088}_{-0.0085}$
$\ln(10^{10} A_s)$	3.085	$3.084^{+0.071}_{-0.072}$	$\langle d^2 \rangle^{1/2}$	2.510	$2.515^{+0.097}_{-0.096}$	$r_{drag}/D_V(0.57)$	0.07234	$0.0723^{+0.0011}_{-0.0012}$
$n_s$	0.9654	$0.964^{+0.011}_{-0.011}$	$z_{re}$	9.73	$9.6^{+3.5}_{-3.5}$	$H(0.57)$	95.12	$95.1^{+2.5}_{-2.8}$
$y_{cal}$	1.00015	$1.0003^{+0.0048}_{-0.0048}$	$10^9 A_s$	2.187	$2.19^{+0.16}_{-0.15}$	$D_A(0.57)$	1380.3	$1379^{+24}_{-24}$
$A_{217}^{CIB}$	66.6	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8806	$1.882^{+0.026}_{-0.026}$	$F_{AP}(0.57)$	0.6876	$0.687^{+0.022}_{-0.022}$
$\xi^{tSZ \times CIB}$	0.03	—	$D_{40}$	1234.8	$1238^{+28}_{-28}$	$f\sigma_8(0.57)$	0.4579	$0.460^{+0.049}_{-0.048}$
$A_{143}^{tSZ}$	7.08	$5.1^{+3.7}_{-3.8}$	$D_{220}$	5716	$5717^{+80}_{-80}$	$\sigma_8(0.57)$	0.5981	$0.599^{+0.045}_{-0.041}$
$A_{100}^{PS}$	252	$258^{+50}_{-50}$	$D_{810}$	2533.7	$2534^{+27}_{-27}$	$f_{2000}^{143}$	29.4	$30^{+6}_{-6}$
$A_{143}^{PS}$	38.9	$44^{+20}_{-20}$	$D_{1420}$	814.4	$814^{+10}_{-9.9}$	$f_{2000}^{143 \times 217}$	32.09	$32^{+4}_{-4}$
$A_{143 \times 217}^{PS}$	33	$39^{+20}_{-20}$	$D_{2000}$	230.43	$230.3^{+3.6}_{-3.6}$	$f_{2000}^{217}$	105.75	$106.0^{+3.9}_{-3.9}$
$A_{217}^{PS}$	97.8	$97^{+20}_{-20}$	$n_{s,0.002}$	0.9654	$0.964^{+0.011}_{-0.011}$	$\chi^2_{lowTEB}$	10496.45	10497.5 ( $\nu$ : 2.3)
$A^{kSZ}$	0.0	—	$Y_P$	0.245339	$0.24532^{+0.00019}_{-0.00019}$	$\chi^2_{plik}$	762.9	776.5 ( $\nu$ : 15.2)
$A_{100}^{dustTT}$	7.31	$7.4^{+3.7}_{-3.6}$	$Y_P^{BBN}$	0.246665	$0.24665^{+0.00019}_{-0.00019}$	$\chi^2_{6DF}$	0.60	0.87 ( $\nu$ : 0.4)
$A_{143}^{dustTT}$	8.96	$9.0^{+3.6}_{-3.5}$	$10^5 D/H$	2.614	$2.621^{+0.083}_{-0.079}$	$\chi^2_{MGS}$	0.31	0.65 ( $\nu$ : 0.3)
$A_{143 \times 217}^{dustTT}$	17.5	$17.1^{+8.0}_{-8.2}$	Age/Gyr	13.777	$13.779^{+0.072}_{-0.069}$	$\chi^2_{DR11CMass}$	1.45	2.4 ( $\nu$ : 1.2)
$A_{217}^{dustTT}$	81.9	$82^{+10}_{-10}$	$z_*$	1090.07	$1090.13^{+0.78}_{-0.75}$	$\chi^2_{DR11LOWZ}$	0.55	0.76 ( $\nu$ : 0.3)
$c_{100}$	0.99786	$0.9979^{+0.0015}_{-0.0015}$	$r_*$	144.55	$144.51^{+0.89}_{-0.88}$	$\chi^2_{prior}$	2.1	7.3 ( $\nu$ : 6.2)
$c_{217}$	0.99588	$0.9959^{+0.0029}_{-0.0028}$	$100\theta_*$	1.04104	$1.04101^{+0.00087}_{-0.00089}$	$\chi^2_{CMB}$	11259.4	11274.0 ( $\nu$ : 14.9)
$H_0$	63.9	$63.9^{+5.5}_{-5.1}$	$D_A/Gpc$	13.885	$13.882^{+0.084}_{-0.082}$	$\chi^2_{BAO}$	2.91	4.6 ( $\nu$ : 1.5)
$\Omega_\Lambda$	0.651	$0.648^{+0.058}_{-0.053}$	$z_{drag}$	1059.63	$1059.59^{+0.88}_{-0.91}$			
$\Omega_m$	0.349	$0.352^{+0.053}_{-0.058}$	$r_{drag}$	147.26	$147.22^{+0.90}_{-0.88}$			

Best-fit  $\chi^2_{eff} = 11264.38$ ;  $\bar{\chi}^2_{eff} = 11285.97$ ;  $R - 1 = 0.00522$

$\chi^2_{eff}$ : BAO - 6DF: 0.60 MGS: 0.31 DR11CMass: 1.45 DR11LOWZ: 0.55 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.45 plik\_dx11dr2\_HM\_v18\_TT: 762.95

## 22.2 base\_w\_wa\_plikHM\_TT\_lowTEB\_BAO\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022276	$0.02224^{+0.00041}_{-0.00044}$	$\Omega_m h^2$	0.14135	$0.1417^{+0.0032}_{-0.0034}$	$k_D$	0.14025	$0.14027^{+0.00089}_{-0.00088}$
$\Omega_c h^2$	0.11843	$0.1188^{+0.0034}_{-0.0035}$	$\Omega_m h^3$	0.0908	$0.0906^{+0.0086}_{-0.0082}$	$100\theta_D$	0.16096	$0.16099^{+0.00053}_{-0.00049}$
$100\theta_{MC}$	1.04104	$1.04099^{+0.00085}_{-0.00091}$	$\sigma_8$	0.785	$0.782^{+0.054}_{-0.048}$	$z_{eq}$	3362	$3370^{+77}_{-80}$
$\tau$	0.0646	$0.062^{+0.034}_{-0.033}$	$\sigma_8 \Omega_m^{0.5}$	0.4591	$0.461^{+0.017}_{-0.018}$	$k_{eq}$	0.010262	$0.01029^{+0.00023}_{-0.00024}$
$w$	-0.62	$-0.54^{+0.59}_{-0.61}$	$\sigma_8 \Omega_m^{0.25}$	0.6002	$0.600^{+0.020}_{-0.020}$	$100\theta_{eq}$	0.8203	$0.819^{+0.015}_{-0.015}$
$w_a$	-0.95	$-1.3^{+1.5}_{-1.7}$	$\sigma_8/h^{0.5}$	0.9789	$0.978^{+0.030}_{-0.029}$	$100\theta_{s,eq}$	0.4531	$0.4524^{+0.0079}_{-0.0079}$
$\ln(10^{10} A_s)$	3.060	$3.054^{+0.060}_{-0.060}$	$\langle d^2 \rangle^{1/2}$	2.448	$2.451^{+0.052}_{-0.054}$	$r_{drag}/D_V(0.57)$	0.07228	$0.0724^{+0.0012}_{-0.0011}$
$n_s$	0.9686	$0.967^{+0.011}_{-0.010}$	$z_{re}$	8.69	$8.3^{+3.3}_{-3.4}$	$H(0.57)$	94.87	$95.1^{+2.8}_{-2.9}$
$y_{cal}$	1.00013	$1.0001^{+0.0052}_{-0.0047}$	$10^9 A_s$	2.132	$2.12^{+0.13}_{-0.12}$	$D_A(0.57)$	1385.1	$1383^{+23}_{-24}$
$A_{217}^{CIB}$	67.1	$64^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8735	$1.875^{+0.024}_{-0.024}$	$F_{AP}(0.57)$	0.6882	$0.689^{+0.024}_{-0.022}$
$\xi^{tSZ \times CIB}$	0.00	—	$D_{40}$	1223.1	$1226^{+23}_{-24}$	$f\sigma_8(0.57)$	0.4463	$0.445^{+0.046}_{-0.041}$
$A_{143}^{tSZ}$	7.18	$5.0^{+3.7}_{-3.8}$	$D_{220}$	5715	$5716^{+84}_{-83}$	$\sigma_8(0.57)$	0.5852	$0.583^{+0.040}_{-0.036}$
$A_{100}^{PS}$	254	$260^{+60}_{-50}$	$D_{810}$	2532.6	$2532^{+28}_{-26}$	$f_{2000}^{143}$	29.8	$31^{+6}_{-5}$
$A_{143}^{PS}$	39.0	$44^{+20}_{-20}$	$D_{1420}$	815.1	$814^{+10}_{-9.7}$	$f_{2000}^{143 \times 217}$	32.45	$33^{+4}_{-4}$
$A_{143 \times 217}^{PS}$	33	$39^{+20}_{-20}$	$D_{2000}$	230.29	$229.9^{+3.6}_{-3.6}$	$f_{2000}^{217}$	106.03	$106.4^{+3.8}_{-3.9}$
$A_{217}^{PS}$	97.3	$96^{+20}_{-20}$	$n_{s,0.002}$	0.9686	$0.967^{+0.011}_{-0.010}$	$\chi^2_{lensing}$	9.32	$10.2 (\nu: 1.5)$
$A^{kSZ}$	0.0	—	$Y_P$	0.245352	$0.24533^{+0.00018}_{-0.00020}$	$\chi^2_{lowTEB}$	10494.90	$10495.8 (\nu: 0.8)$
$A_{100}^{dustTT}$	7.40	$7.4^{+3.7}_{-3.6}$	$Y_P^{BBN}$	0.246678	$0.24666^{+0.00019}_{-0.00020}$	$\chi^2_{plik}$	766.2	$779.1 (\nu: 14.4)$
$A_{143}^{dustTT}$	9.09	$9.1^{+3.6}_{-3.5}$	$10^5 D/H$	2.609	$2.617^{+0.085}_{-0.077}$	$\chi^2_{6DF}$	0.52	$0.89 (\nu: 0.4)$
$A_{143 \times 217}^{dustTT}$	17.7	$17.3^{+7.8}_{-8.6}$	Age/Gyr	13.792	$13.790^{+0.072}_{-0.069}$	$\chi^2_{MGS}$	0.35	$0.64 (\nu: 0.3)$
$A_{217}^{dustTT}$	82.1	$82^{+10}_{-20}$	$z_*$	1089.90	$1089.98^{+0.77}_{-0.74}$	$\chi^2_{DR11CMAS}$	1.33	$2.3 (\nu: 1.2)$
$c_{100}$	0.99789	$0.9979^{+0.0015}_{-0.0016}$	$r_*$	144.91	$144.85^{+0.79}_{-0.78}$	$\chi^2_{DR11LOWZ}$	0.66	$0.79 (\nu: 0.3)$
$c_{217}$	0.99594	$0.9960^{+0.0029}_{-0.0028}$	$100\theta_*$	1.04124	$1.04119^{+0.00089}_{-0.00087}$	$\chi^2_{prior}$	2.1	$7.4 (\nu: 6.5)$
$H_0$	64.2	$63.9^{+5.7}_{-5.4}$	$D_A/Gpc$	13.917	$13.912^{+0.072}_{-0.073}$	$\chi^2_{CMB}$	11270.4	$11285.1 (\nu: 14.6)$
$\Omega_\Lambda$	0.658	$0.651^{+0.057}_{-0.057}$	$z_{drag}$	1059.59	$1059.54^{+0.85}_{-0.94}$	$\chi^2_{BAO}$	2.86	$4.6 (\nu: 1.4)$
$\Omega_m$	0.342	$0.349^{+0.057}_{-0.057}$	$r_{drag}$	147.61	$147.56^{+0.78}_{-0.79}$			

Best-fit  $\chi^2_{eff} = 11275.37$ ;  $\bar{\chi}^2_{eff} = 11297.07$ ;  $R - 1 = 0.01814$

$\chi^2_{eff}$ : BAO - 6DF: 0.52 MGS: 0.35 DR11CMAS: 1.33 DR11LOWZ: 0.66 CMB - smica\_g30\_ftl\_full\_pp: 9.32 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.90 plik\_dx11dr2\_HM\_v18\_TT: 766.19

### 22.3 base\_w\_wa\_plikHM\_TTTEEE\_lowTEB\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022258	$0.02224^{+0.00030}_{-0.00030}$	$A_{143}^{\text{dust}TE}$	0.156	$0.16^{+0.11}_{-0.11}$	$100\theta_*$	1.04095	$1.04095^{+0.00060}_{-0.00060}$
$\Omega_c h^2$	0.12000	$0.1200^{+0.0027}_{-0.0027}$	$A_{143 \times 217}^{\text{dust}TE}$	0.339	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.883	$13.884^{+0.056}_{-0.056}$
$100\theta_{\text{MC}}$	1.04074	$1.04075^{+0.00062}_{-0.00061}$	$A_{217}^{\text{dust}TE}$	1.67	$1.67^{+0.50}_{-0.50}$	$z_{\text{drag}}$	1059.67	$1059.64^{+0.60}_{-0.62}$
$\tau$	0.0770	$0.076^{+0.033}_{-0.033}$	$c_{100}$	0.99820	$0.9982^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.22	$147.23^{+0.60}_{-0.59}$
$w$	-0.50	$-0.51^{+0.57}_{-0.60}$	$c_{217}$	0.99593	$0.9959^{+0.0028}_{-0.0028}$	$k_D$	0.14065	$0.14062^{+0.00063}_{-0.00064}$
$w_a$	-1.44	$< -0.0299$	$H_0$	63.8	$64.0^{+5.7}_{-5.2}$	$100\theta_D$	0.160888	$0.16091^{+0.00036}_{-0.00035}$
$\ln(10^{10} A_s)$	3.089	$3.088^{+0.062}_{-0.064}$	$\Omega_\Lambda$	0.648	$0.649^{+0.060}_{-0.054}$	$z_{\text{eq}}$	3399	$3400^{+61}_{-62}$
$n_s$	0.9648	$0.9641^{+0.0090}_{-0.0089}$	$\Omega_m$	0.352	$0.351^{+0.054}_{-0.060}$	$k_{\text{eq}}$	0.010375	$0.01038^{+0.00019}_{-0.00019}$
$y_{\text{cal}}$	1.00016	$1.0004^{+0.0049}_{-0.0048}$	$\Omega_m h^2$	0.14290	$0.1429^{+0.0025}_{-0.0026}$	$100\theta_{\text{eq}}$	0.8134	$0.813^{+0.012}_{-0.011}$
$A_{217}^{\text{CIB}}$	64.5	$64^{+10}_{-10}$	$\Omega_m h^3$	0.0911	$0.0915^{+0.0084}_{-0.0079}$	$100\theta_{s,\text{eq}}$	0.4495	$0.4495^{+0.0060}_{-0.0058}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.33	—	$\sigma_8$	0.803	$0.805^{+0.058}_{-0.056}$	$r_{\text{drag}}/D_V(0.57)$	0.07236	$0.0724^{+0.0011}_{-0.0011}$
$A_{143}^{\text{tSZ}}$	6.98	$5.3^{+3.6}_{-3.7}$	$\sigma_8 \Omega_m^{0.5}$	0.4763	$0.476^{+0.020}_{-0.021}$	$H(0.57)$	95.21	$95.1^{+2.7}_{-2.8}$
$A_{100}^{\text{PS}}$	253	$260^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6186	$0.619^{+0.025}_{-0.024}$	$D_A(0.57)$	1379.8	$1379^{+23}_{-23}$
$A_{143}^{\text{PS}}$	43.4	$44^{+10}_{-20}$	$\sigma_8/h^{0.5}$	1.0062	$1.006^{+0.038}_{-0.037}$	$F_{\text{AP}}(0.57)$	0.6880	$0.687^{+0.022}_{-0.022}$
$A_{143 \times 217}^{\text{PS}}$	42.5	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.519	$2.519^{+0.080}_{-0.079}$	$f\sigma_8(0.57)$	0.4582	$0.460^{+0.047}_{-0.045}$
$A_{217}^{\text{PS}}$	101.7	$98^{+20}_{-20}$	$z_{\text{re}}$	9.87	$9.7^{+3.0}_{-3.2}$	$\sigma_8(0.57)$	0.5988	$0.600^{+0.043}_{-0.042}$
$A^{\text{kSZ}}$	0.00	$< 7.66$	$10^9 A_s$	2.196	$2.19^{+0.14}_{-0.14}$	$f_{2000}^{143}$	28.9	$29^{+5}_{-5}$
$A_{100}^{\text{dust}TT}$	7.35	$7.4^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8828	$1.883^{+0.023}_{-0.023}$	$f_{2000}^{143 \times 217}$	31.97	$32^{+4}_{-4}$
$A_{143}^{\text{dust}TT}$	8.99	$8.9^{+3.6}_{-3.6}$	$D_{40}$	1238.2	$1241^{+25}_{-24}$	$f_{2000}^{217}$	105.47	$105.8^{+3.7}_{-3.6}$
$A_{143 \times 217}^{\text{dust}TT}$	17.9	$16.9^{+8.1}_{-8.1}$	$D_{220}$	5725	$5728^{+74}_{-73}$	$\chi_{\text{lowTEB}}^2$	10496.87	$10497.7 (\nu: 2.0)$
$A_{217}^{\text{dust}TT}$	82.5	$82^{+10}_{-10}$	$D_{810}$	2535.7	$2536^{+27}_{-26}$	$\chi_{\text{plik}}^2$	2431.5	$2450.0 (\nu: 22.4)$
$A_{100}^{\text{dust}EE}$	0.0811	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	814.9	$814.5^{+9.4}_{-9.2}$	$\chi_{6\text{DF}}^2$	0.65	$0.88 (\nu: 0.4)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0488	$0.0487^{+0.0098}_{-0.0098}$	$D_{2000}$	230.62	$230.4^{+3.1}_{-3.1}$	$\chi_{\text{MGS}}^2$	0.28	$0.67 (\nu: 0.3)$
$A_{100 \times 217}^{\text{dust}EE}$	0.0997	$0.0995^{+0.064}_{-0.063}$	$n_{s,0.002}$	0.9648	$0.9641^{+0.0090}_{-0.0089}$	$\chi_{\text{DR11CMass}}^2$	1.44	$2.3 (\nu: 1.2)$
$A_{143}^{\text{dust}EE}$	0.1001	$0.100^{+0.014}_{-0.013}$	$Y_P$	0.245344	$0.24533^{+0.00014}_{-0.00014}$	$\chi_{\text{DR11LOWZ}}^2$	0.55	$0.74 (\nu: 0.3)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.224^{+0.091}_{-0.092}$	$Y_P^{\text{BBN}}$	0.246670	$0.24666^{+0.00014}_{-0.00014}$	$\chi_{\text{prior}}^2$	6.6	$19.2 (\nu: 14.7)$
$A_{217}^{\text{dust}EE}$	0.652	$0.65^{+0.25}_{-0.25}$	$10^5 D/H$	2.612	$2.616^{+0.057}_{-0.057}$	$\chi_{\text{CMB}}^2$	12928.3	$12947.7 (\nu: 22.2)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.074}_{-0.074}$	Age/Gyr	13.777	$13.778^{+0.063}_{-0.062}$	$\chi_{\text{BAO}}^2$	2.92	$4.6 (\nu: 1.5)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.058}_{-0.057}$	$z_*$	1090.06	$1090.09^{+0.56}_{-0.55}$			
$A_{100 \times 217}^{\text{dust}TE}$	0.302	$0.30^{+0.17}_{-0.17}$	$r_*$	144.52	$144.52^{+0.60}_{-0.59}$			

Best-fit  $\chi_{\text{eff}}^2 = 12937.86$ ;  $\bar{\chi}_{\text{eff}}^2 = 12971.50$ ;  $R - 1 = 0.00886$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.65 MGS: 0.28 DR11CMass: 1.44 DR11LOWZ: 0.55 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10496.87 plik\_dx11dr2\_HM\_v18\_TTTEEE:

## 22.4 base\_w\_wa\_plikHM\_TTTEEE\_lowTEB\_BAO\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022277	$0.02225^{+0.00030}_{-0.00029}$	$A_{143}^{\text{dust}TE}$	0.155	$0.16^{+0.10}_{-0.11}$	$100\theta_*$	1.04107	$1.04106^{+0.00056}_{-0.00060}$
$\Omega_c h^2$	0.11909	$0.1194^{+0.0026}_{-0.0028}$	$A_{143 \times 217}^{\text{dust}TE}$	0.339	$0.34^{+0.16}_{-0.16}$	$D_A/\text{Gpc}$	13.903	$13.898^{+0.057}_{-0.052}$
$100\theta_{\text{MC}}$	1.04088	$1.04086^{+0.00058}_{-0.00060}$	$A_{217}^{\text{dust}TE}$	1.68	$1.67^{+0.49}_{-0.52}$	$z_{\text{drag}}$	1059.67	$1059.60^{+0.60}_{-0.58}$
$\tau$	0.0607	$0.058^{+0.029}_{-0.029}$	$c_{100}$	0.99815	$0.9981^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.44	$147.40^{+0.59}_{-0.56}$
$w$	-0.60	$-0.54^{+0.61}_{-0.62}$	$c_{217}$	0.99607	$0.9961^{+0.0029}_{-0.0029}$	$k_D$	0.14043	$0.14045^{+0.00060}_{-0.00064}$
$w_a$	-1.08	< 0.141	$H_0$	64.2	$64.1^{+5.8}_{-5.4}$	$100\theta_D$	0.160910	$0.16094^{+0.00035}_{-0.00035}$
$\ln(10^{10} A_s)$	3.053	$3.050^{+0.052}_{-0.055}$	$\Omega_\Lambda$	0.656	$0.651^{+0.059}_{-0.055}$	$z_{\text{eq}}$	3378	$3384^{+57}_{-62}$
$n_s$	0.9660	$0.9651^{+0.0085}_{-0.0090}$	$\Omega_m$	0.344	$0.349^{+0.055}_{-0.059}$	$k_{\text{eq}}$	0.010311	$0.01033^{+0.00018}_{-0.00019}$
$y_{\text{cal}}$	0.99986	$1.0001^{+0.0047}_{-0.0047}$	$\Omega_m h^2$	0.14201	$0.1423^{+0.0024}_{-0.0026}$	$100\theta_{\text{eq}}$	0.8173	$0.816^{+0.012}_{-0.012}$
$A_{217}^{\text{CIB}}$	67.7	$65^{+10}_{-10}$	$\Omega_m h^3$	0.0912	$0.0911^{+0.0086}_{-0.0080}$	$100\theta_{s,\text{eq}}$	0.4516	$0.4510^{+0.0061}_{-0.0056}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.02	—	$\sigma_8$	0.786	$0.785^{+0.054}_{-0.051}$	$r_{\text{drag}}/D_V(0.57)$	0.07227	$0.0724^{+0.0012}_{-0.0012}$
$A_{143}^{\text{tSZ}}$	7.30	$5.3^{+3.7}_{-3.8}$	$\sigma_8 \Omega_m^{0.5}$	0.4614	$0.463^{+0.016}_{-0.016}$	$H(0.57)$	94.91	$95.1^{+2.9}_{-2.9}$
$A_{100}^{\text{PS}}$	257	$262^{+50}_{-50}$	$\sigma_8 \Omega_m^{0.25}$	0.6024	$0.603^{+0.018}_{-0.019}$	$D_A(0.57)$	1383.3	$1381^{+23}_{-23}$
$A_{143}^{\text{PS}}$	38.9	$44^{+10}_{-20}$	$\sigma_8/h^{0.5}$	0.9812	$0.981^{+0.029}_{-0.027}$	$F_{\text{AP}}(0.57)$	0.6875	$0.688^{+0.021}_{-0.023}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4560	$2.459^{+0.048}_{-0.046}$	$f\sigma_8(0.57)$	0.4483	$0.448^{+0.045}_{-0.043}$
$A_{217}^{\text{PS}}$	96.8	$97^{+20}_{-20}$	$z_{\text{re}}$	8.31	$8.0^{+2.9}_{-3.0}$	$\sigma_8(0.57)$	0.5863	$0.586^{+0.040}_{-0.038}$
$A^{\text{kSZ}}$	0.00	< 8.06	$10^9 A_s$	2.119	$2.11^{+0.11}_{-0.11}$	$f_{2000}^{143}$	29.8	$30^{+5}_{-5}$
$A_{100}^{\text{dust}TT}$	7.47	$7.5^{+3.8}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8764	$1.878^{+0.022}_{-0.023}$	$f_{2000}^{143 \times 217}$	32.56	$32.8^{+3.5}_{-3.4}$
$A_{143}^{\text{dust}TT}$	9.12	$9.1^{+3.6}_{-3.5}$	$D_{40}$	1227.9	$1231^{+22}_{-20}$	$f_{2000}^{217}$	106.07	$106.3^{+3.5}_{-3.5}$
$A_{143 \times 217}^{\text{dust}TT}$	17.7	$17.4^{+8.2}_{-8.4}$	$D_{220}$	5722	$5724^{+72}_{-69}$	$\chi_{\text{lensing}}^2$	9.94	10.7 ( $\nu$ : 2.0)
$A_{217}^{\text{dust}TT}$	81.8	$82^{+10}_{-10}$	$D_{810}$	2532.7	$2534^{+25}_{-25}$	$\chi_{\text{lowTEB}}^2$	10495.34	10496.0 ( $\nu$ : 0.7)
$A_{100}^{\text{dust}EE}$	0.0814	$0.081^{+0.011}_{-0.011}$	$D_{1420}$	814.5	$814.4^{+9.1}_{-8.8}$	$\chi_{\text{plik}}^2$	2434.8	2453.1 ( $\nu$ : 22.1)
$A_{100 \times 143}^{\text{dust}EE}$	0.0493	$0.0491^{+0.010}_{-0.0099}$	$D_{2000}$	230.03	$229.9^{+3.1}_{-3.0}$	$\chi_{6\text{DF}}^2$	0.53	0.87 ( $\nu$ : 0.4)
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.100^{+0.063}_{-0.062}$	$n_{s,0.002}$	0.9660	$0.9651^{+0.0085}_{-0.0090}$	$\chi_{\text{MGS}}^2$	0.35	0.68 ( $\nu$ : 0.4)
$A_{143}^{\text{dust}EE}$	0.1006	$0.100^{+0.013}_{-0.013}$	$Y_P$	0.245352	$0.24534^{+0.00013}_{-0.00014}$	$\chi_{\text{DR11CMass}}^2$	1.37	2.3 ( $\nu$ : 1.2)
$A_{143 \times 217}^{\text{dust}EE}$	0.224	$0.226^{+0.090}_{-0.090}$	$Y_P^{\text{BBN}}$	0.246678	$0.24666^{+0.00013}_{-0.00014}$	$\chi_{\text{DR11LOWZ}}^2$	0.63	0.78 ( $\nu$ : 0.3)
$A_{217}^{\text{dust}EE}$	0.655	$0.65^{+0.25}_{-0.25}$	$10^5 D/H$	2.609	$2.615^{+0.056}_{-0.057}$	$\chi_{\text{prior}}^2$	7.1	19.3 ( $\nu$ : 14.4)
$A_{100}^{\text{dust}TE}$	0.140	$0.141^{+0.071}_{-0.076}$	$\text{Age}/\text{Gyr}$	13.787	$13.785^{+0.063}_{-0.061}$	$\chi_{\text{CMB}}^2$	12940.1	12959.8 ( $\nu$ : 22.0)
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.132^{+0.056}_{-0.055}$	$z_*$	1089.96	$1090.02^{+0.56}_{-0.54}$	$\chi_{\text{BAO}}^2$	2.88	4.7 ( $\nu$ : 1.7)
$A_{100 \times 217}^{\text{dust}TE}$	0.305	$0.30^{+0.17}_{-0.16}$	$r_*$	144.74	$144.69^{+0.60}_{-0.57}$			

Best-fit  $\chi^2_{\text{eff}} = 12950.11$ ;  $\bar{\chi}^2_{\text{eff}} = 12983.72$ ;  $R - 1 = 0.04096$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.53 MGS: 0.35 DR11CMASS: 1.37 DR11LOWZ: 0.63 CMB - smica\_g30\_ftl\_full\_pp: 9.94 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.34 plik\_dx11dr2\_HM\_v18\_TT: 2434.85

## 22.5 base\_w\_wa\_plikHM\_TT\_lowTEB\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022224	$0.02220^{+0.00043}_{-0.00042}$	$\Omega_m$	0.3087	$0.309^{+0.020}_{-0.020}$	$k_D$	0.14060	$0.1406^{+0.0010}_{-0.0010}$
$\Omega_c h^2$	0.12007	$0.1203^{+0.0039}_{-0.0039}$	$\Omega_m h^2$	0.14294	$0.1432^{+0.0037}_{-0.0038}$	$100\theta_D$	0.16095	$0.16097^{+0.00051}_{-0.00051}$
$100\theta_{\text{MC}}$	1.04085	$1.04080^{+0.00089}_{-0.00089}$	$\Omega_m h^3$	0.09726	$0.0975^{+0.0041}_{-0.0041}$	$z_{\text{eq}}$	3400	$3406^{+89}_{-90}$
$\tau$	0.0760	$0.074^{+0.037}_{-0.038}$	$\sigma_8$	0.8398	$0.841^{+0.041}_{-0.040}$	$k_{\text{eq}}$	0.010378	$0.01040^{+0.00027}_{-0.00027}$
$w$	-0.948	$-0.93^{+0.23}_{-0.22}$	$\sigma_8 \Omega_m^{0.5}$	0.4666	$0.467^{+0.024}_{-0.024}$	$100\theta_{\text{eq}}$	0.8132	$0.812^{+0.017}_{-0.016}$
$w_a$	-0.31	$-0.41^{+0.87}_{-0.91}$	$\sigma_8 \Omega_m^{0.25}$	0.6260	$0.627^{+0.030}_{-0.029}$	$100\theta_{\text{s,eq}}$	0.4494	$0.4489^{+0.0088}_{-0.0084}$
$\ln(10^{10} A_s)$	3.087	$3.084^{+0.071}_{-0.073}$	$\sigma_8/h^{0.5}$	1.0181	$1.019^{+0.044}_{-0.043}$	$r_{\text{drag}}/D_V(0.57)$	0.07197	$0.07197^{+0.00098}_{-0.00098}$
$n_s$	0.9652	$0.964^{+0.012}_{-0.011}$	$\langle d^2 \rangle^{1/2}$	2.512	$2.515^{+0.097}_{-0.099}$	$H(0.57)$	93.27	$93.2^{+1.1}_{-1.1}$
$y_{\text{cal}}$	1.00035	$1.0003^{+0.0049}_{-0.0048}$	$z_{\text{re}}$	9.80	$9.6^{+3.5}_{-3.6}$	$D_A(0.57)$	1377.0	$1376^{+23}_{-22}$
$\alpha_{JLA}$	0.1411	$0.141^{+0.013}_{-0.013}$	$10^9 A_s$	2.191	$2.19^{+0.16}_{-0.15}$	$F_{\text{AP}}(0.57)$	0.6726	$0.6717^{+0.0095}_{-0.0099}$
$\beta_{JLA}$	3.098	$3.10^{+0.16}_{-0.16}$	$10^9 A_s e^{-2\tau}$	1.8820	$1.883^{+0.026}_{-0.026}$	$f\sigma_8(0.57)$	0.4893	$0.491^{+0.031}_{-0.030}$
$A_{217}^{\text{CIB}}$	66.4	$64^{+10}_{-10}$	$D_{40}$	1235.6	$1238^{+28}_{-27}$	$\sigma_8(0.57)$	0.6257	$0.626^{+0.030}_{-0.030}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.08	—	$D_{220}$	5715	$5716^{+81}_{-79}$	$f_{2000}^{143}$	29.4	$30^{+6}_{-6}$
$A_{143}^{\text{tSZ}}$	7.19	$5.1^{+3.7}_{-3.8}$	$D_{810}$	2534.9	$2535^{+27}_{-26}$	$f_{2000}^{143 \times 217}$	32.20	$32^{+4}_{-4}$
$A_{100}^{\text{PS}}$	252	$258^{+50}_{-50}$	$D_{1420}$	814.8	$814.2^{+9.8}_{-9.7}$	$f_{2000}^{217}$	105.84	$106.1^{+3.9}_{-3.9}$
$A_{143}^{\text{PS}}$	39.5	$44^{+20}_{-20}$	$D_{2000}$	230.49	$230.2^{+3.5}_{-3.5}$	$\chi^2_{\text{lowTEB}}$	10496.29	$10497.3 (\nu: 2.3)$
$A_{143 \times 217}^{\text{PS}}$	34.7	$39^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9652	$0.964^{+0.012}_{-0.011}$	$\chi^2_{\text{plik}}$	763.1	$776.8 (\nu: 15.5)$
$A_{217}^{\text{PS}}$	98.5	$98^{+20}_{-20}$	$Y_{\text{P}}$	0.245328	$0.24531^{+0.00019}_{-0.00019}$	$\chi^2_{\text{H070p6}}$	0.56	$0.62 (\nu: 0.1)$
$A^{\text{kSZ}}$	0.00	$< 8.25$	$Y_{\text{P}}^{\text{BBN}}$	0.246655	$0.24664^{+0.00019}_{-0.00019}$	$\chi^2_{\text{JLA}}$	695.04	$698.0 (\nu: 2.9)$
$A_{100}^{\text{dustTT}}$	7.39	$7.4^{+3.7}_{-3.7}$	$10^5 D/H$	2.619	$2.624^{+0.081}_{-0.081}$	$\chi^2_{6\text{DF}}$	0.000	$0.071 (\nu: 0.0)$
$A_{143}^{\text{dustTT}}$	9.04	$9.0^{+3.6}_{-3.6}$	Age/Gyr	13.772	$13.771^{+0.077}_{-0.070}$	$\chi^2_{\text{MGS}}$	1.75	$1.91 (\nu: 0.3)$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.1^{+8.2}_{-8.2}$	$z_*$	1090.11	$1090.17^{+0.77}_{-0.77}$	$\chi^2_{\text{DR11CMASS}}$	2.68	$3.4 (\nu: 0.6)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$r_*$	144.53	$144.48^{+0.90}_{-0.89}$	$\chi^2_{\text{DR11LOWZ}}$	0.20	$0.37 (\nu: 0.1)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	$100\theta_*$	1.04105	$1.04100^{+0.00088}_{-0.00087}$	$\chi^2_{\text{prior}}$	2.0	$7.3 (\nu: 6.2)$
$c_{217}$	0.99589	$0.9959^{+0.0028}_{-0.0028}$	$D_A/\text{Gpc}$	13.883	$13.879^{+0.084}_{-0.083}$	$\chi^2_{\text{CMB}}$	11259.4	$11274.1 (\nu: 15.3)$
$H_0$	68.04	$68.1^{+2.1}_{-2.0}$	$z_{\text{drag}}$	1059.59	$1059.57^{+0.90}_{-0.88}$	$\chi^2_{\text{BAO}}$	4.63	$5.8 (\nu: 1.4)$
$\Omega_\Lambda$	0.6913	$0.691^{+0.020}_{-0.020}$	$r_{\text{drag}}$	147.24	$147.19^{+0.92}_{-0.90}$			

Best-fit  $\chi^2_{\text{eff}} = 11961.65$ ;  $\bar{\chi}^2_{\text{eff}} = 11985.69$ ;  $R - 1 = 0.00884$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.75 DR11CMASS: 2.68 DR11LOWZ: 0.20 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.29 plik\_dx11dr2\_HM\_v18\_TT: 763.10

**22.6 base\_w\_wa\_plikHM\_TT\_lowTEB\_BAO\_H070p6\_JLA\_post\_lensing**

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022279	$0.02223^{+0.00044}_{-0.00042}$	$\Omega_m$	0.3066	$0.307^{+0.020}_{-0.020}$	$k_D$	0.14029	$0.14029^{+0.00088}_{-0.00091}$
$\Omega_c h^2$	0.11859	$0.1189^{+0.0037}_{-0.0036}$	$\Omega_m h^2$	0.14151	$0.1418^{+0.0034}_{-0.0034}$	$100\theta_D$	0.16095	$0.16100^{+0.00050}_{-0.00050}$
$100\theta_{MC}$	1.04102	$1.04096^{+0.00087}_{-0.00087}$	$\Omega_m h^3$	0.09613	$0.0964^{+0.0040}_{-0.0039}$	$z_{eq}$	3366	$3373^{+82}_{-81}$
$\tau$	0.0651	$0.062^{+0.036}_{-0.035}$	$\sigma_8$	0.8166	$0.817^{+0.027}_{-0.027}$	$k_{eq}$	0.010274	$0.01030^{+0.00025}_{-0.00025}$
$w$	-0.974	$-0.96^{+0.22}_{-0.21}$	$\sigma_8 \Omega_m^{0.5}$	0.4522	$0.453^{+0.015}_{-0.014}$	$100\theta_{eq}$	0.8196	$0.818^{+0.016}_{-0.016}$
$w_a$	-0.11	$-0.19^{+0.77}_{-0.80}$	$\sigma_8 \Omega_m^{0.25}$	0.6077	$0.608^{+0.017}_{-0.017}$	$100\theta_{s,eq}$	0.4527	$0.4520^{+0.0080}_{-0.0080}$
$\ln(10^{10} A_s)$	3.061	$3.056^{+0.065}_{-0.063}$	$\sigma_8/h^{0.5}$	0.9908	$0.991^{+0.024}_{-0.024}$	$r_{drag}/D_V(0.57)$	0.07200	$0.07200^{+0.00099}_{-0.0010}$
$n_s$	0.9681	$0.967^{+0.011}_{-0.011}$	$\langle d^2 \rangle^{1/2}$	2.450	$2.451^{+0.054}_{-0.053}$	$H(0.57)$	93.26	$93.2^{+1.2}_{-1.2}$
$y_{cal}$	1.00019	$1.0002^{+0.0048}_{-0.0048}$	$z_{re}$	8.74	$8.4^{+3.4}_{-3.6}$	$D_A(0.57)$	1380.5	$1380^{+23}_{-23}$
$\alpha_{JLA}$	0.1412	$0.141^{+0.013}_{-0.013}$	$10^9 A_s$	2.135	$2.12^{+0.14}_{-0.13}$	$F_{AP}(0.57)$	0.6742	$0.6734^{+0.0090}_{-0.0094}$
$\beta_{JLA}$	3.101	$3.10^{+0.16}_{-0.16}$	$10^9 A_s e^{-2\tau}$	1.8745	$1.876^{+0.024}_{-0.024}$	$f\sigma_8(0.57)$	0.4734	$0.475^{+0.022}_{-0.021}$
$A_{217}^{CIB}$	67.3	$65^{+10}_{-10}$	$D_{40}$	1224.5	$1227^{+24}_{-24}$	$\sigma_8(0.57)$	0.6090	$0.609^{+0.020}_{-0.021}$
$\xi^{tSZ \times CIB}$	0.00	—	$D_{220}$	5717	$5716^{+81}_{-77}$	$f_{2000}^{143}$	29.9	$31^{+6}_{-6}$
$A_{143}^{tSZ}$	7.20	$5.0^{+3.8}_{-3.8}$	$D_{810}$	2533.3	$2533^{+27}_{-26}$	$f_{2000}^{143 \times 217}$	32.47	$33^{+4}_{-4}$
$A_{100}^{PS}$	254	$260^{+50}_{-60}$	$D_{1420}$	815.3	$814^{+10}_{-10}$	$f_{2000}^{217}$	106.03	$106.4^{+4.0}_{-3.8}$
$A_{143}^{PS}$	39.0	$44^{+20}_{-20}$	$D_{2000}$	230.31	$229.9^{+3.6}_{-3.7}$	$\chi^2_{lensing}$	9.31	$10.1 (\nu: 1.4)$
$A_{143 \times 217}^{PS}$	33	$39^{+20}_{-20}$	$n_{s,0.002}$	0.9681	$0.967^{+0.011}_{-0.011}$	$\chi^2_{lowTEB}$	10494.81	$10495.7 (\nu: 0.9)$
$A_{217}^{PS}$	97.2	$96^{+20}_{-20}$	$Y_P$	0.245353	$0.24533^{+0.00020}_{-0.00019}$	$\chi^2_{plik}$	766.2	$779.2 (\nu: 28.4)$
$A^{kSZ}$	0.0	—	$Y_P^{BBN}$	0.246679	$0.24665^{+0.00020}_{-0.00019}$	$\chi^2_{H070p6}$	0.63	$0.70 (\nu: 0.1)$
$A_{100}^{dustTT}$	7.51	$7.5^{+3.7}_{-3.7}$	$10^5 D/H$	2.609	$2.619^{+0.082}_{-0.082}$	$\chi^2_{JLA}$	695.13	$698.1 (\nu: 2.9)$
$A_{143}^{dustTT}$	9.04	$9.1^{+3.7}_{-3.5}$	Age/Gyr	13.785	$13.787^{+0.078}_{-0.071}$	$\chi^2_{6DF}$	0.000	$0.073 (\nu: 0.0)$
$A_{143 \times 217}^{dustTT}$	17.5	$17.1^{+8.2}_{-8.1}$	$z_*$	1089.91	$1090.01^{+0.76}_{-0.79}$	$\chi^2_{MGS}$	1.68	$1.83 (\nu: 0.3)$
$A_{217}^{dustTT}$	81.8	$82^{+10}_{-10}$	$r_*$	144.87	$144.82^{+0.79}_{-0.81}$	$\chi^2_{DR11CMAS}$	2.50	$3.2 (\nu: 0.6)$
$c_{100}$	0.99795	$0.9979^{+0.0015}_{-0.0016}$	$100\theta_*$	1.04121	$1.04116^{+0.00085}_{-0.00085}$	$\chi^2_{DR11LOWZ}$	0.24	$0.42 (\nu: 0.1)$
$c_{217}$	0.99596	$0.9960^{+0.0028}_{-0.0029}$	$D_A/Gpc$	13.913	$13.909^{+0.075}_{-0.075}$	$\chi^2_{prior}$	2.0	$7.5 (\nu: 6.5)$
$H_0$	67.93	$68.0^{+2.1}_{-2.0}$	$z_{drag}$	1059.63	$1059.52^{+0.91}_{-0.88}$	$\chi^2_{CMB}$	11270.3	$11285.0 (\nu: 28.7)$
$\Omega_\Lambda$	0.6934	$0.693^{+0.020}_{-0.020}$	$r_{drag}$	147.57	$147.54^{+0.80}_{-0.80}$	$\chi^2_{BAO}$	4.42	$5.6 (\nu: 1.4)$

Best-fit  $\chi^2_{eff} = 11972.55$ ;  $\bar{\chi}^2_{eff} = 11996.80$ ;  $R - 1 = 0.02467$   
 $\chi^2_{eff}$ : BAO - 6DF: 0.00 MGS: 1.68 DR11CMAS: 2.50 DR11LOWZ: 0.24 CMB - smica\_g30\_ftl\_full\_pp: 9.31 lowL\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.81 plik\_dx11dr2\_HM\_v18\_TT: 766.21 Hubble - H070p6: 0.63 SN - JLA December\_2013: 695.13

## 22.7 base\_w\_wa\_plikHM\_TTTEEE\_lowTEB\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022262	$0.02224^{+0.00029}_{-0.00030}$	$A_{100 \times 217}^{\text{dust}TE}$	0.305	$0.30^{+0.17}_{-0.17}$	$100\theta_*$	1.04096	$1.04093^{+0.00061}_{-0.00061}$
$\Omega_c h^2$	0.11980	$0.1201^{+0.0028}_{-0.0027}$	$A_{143}^{\text{dust}TE}$	0.153	$0.16^{+0.11}_{-0.11}$	$D_A/\text{Gpc}$	13.888	$13.882^{+0.056}_{-0.057}$
$100\theta_{\text{MC}}$	1.04076	$1.04073^{+0.00062}_{-0.00062}$	$A_{143 \times 217}^{\text{dust}TE}$	0.334	$0.34^{+0.16}_{-0.16}$	$z_{\text{drag}}$	1059.67	$1059.63^{+0.62}_{-0.61}$
$\tau$	0.0798	$0.077^{+0.034}_{-0.034}$	$A_{217}^{\text{dust}TE}$	1.66	$1.67^{+0.50}_{-0.50}$	$r_{\text{drag}}$	147.27	$147.21^{+0.60}_{-0.61}$
$w$	-0.953	$-0.94^{+0.22}_{-0.21}$	$c_{100}$	0.99815	$0.9982^{+0.0015}_{-0.0015}$	$k_D$	0.14060	$0.14064^{+0.00064}_{-0.00064}$
$w_a$	-0.28	$-0.38^{+0.80}_{-0.84}$	$c_{217}$	0.99587	$0.9960^{+0.0028}_{-0.0028}$	$100\theta_D$	0.160891	$0.16091^{+0.00036}_{-0.00035}$
$\ln(10^{10} A_s)$	3.095	$3.089^{+0.065}_{-0.065}$	$H_0$	68.06	$68.1^{+2.1}_{-2.0}$	$z_{\text{eq}}$	3395	$3402^{+63}_{-61}$
$n_s$	0.9650	$0.9637^{+0.0091}_{-0.0090}$	$\Omega_\Lambda$	0.6919	$0.691^{+0.019}_{-0.019}$	$k_{\text{eq}}$	0.010361	$0.01038^{+0.00019}_{-0.00018}$
$y_{\text{cal}}$	1.00030	$1.0004^{+0.0049}_{-0.0048}$	$\Omega_m$	0.3081	$0.309^{+0.019}_{-0.019}$	$100\theta_{\text{eq}}$	0.8142	$0.813^{+0.012}_{-0.012}$
$\alpha_{JLA}$	0.1411	$0.141^{+0.013}_{-0.013}$	$\Omega_m h^2$	0.14271	$0.1430^{+0.0026}_{-0.0025}$	$100\theta_{s,\text{eq}}$	0.4499	$0.4493^{+0.0059}_{-0.0060}$
$\beta_{JLA}$	3.102	$3.10^{+0.16}_{-0.16}$	$\Omega_m h^3$	0.09713	$0.0974^{+0.0037}_{-0.0035}$	$r_{\text{drag}}/D_V(0.57)$	0.07197	$0.0720^{+0.0010}_{-0.00097}$
$A_{217}^{\text{CIB}}$	66.0	$64^{+10}_{-10}$	$\sigma_8$	0.8408	$0.841^{+0.034}_{-0.034}$	$H(0.57)$	93.26	$93.3^{+1.1}_{-1.1}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.16	—	$\sigma_8 \Omega_m^{0.5}$	0.4667	$0.467^{+0.018}_{-0.017}$	$D_A(0.57)$	1377.4	$1376^{+22}_{-23}$
$A_{143}^{\text{tSZ}}$	7.18	$5.3^{+3.6}_{-3.8}$	$\sigma_8 \Omega_m^{0.25}$	0.6264	$0.627^{+0.023}_{-0.022}$	$F_{\text{AP}}(0.57)$	0.6727	$0.6719^{+0.0089}_{-0.0098}$
$A_{100}^{\text{PS}}$	253	$260^{+50}_{-50}$	$\sigma_8/h^{0.5}$	1.0192	$1.020^{+0.035}_{-0.034}$	$f\sigma_8(0.57)$	0.4896	$0.491^{+0.025}_{-0.024}$
$A_{143}^{\text{PS}}$	40.3	$43^{+10}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.518	$2.520^{+0.079}_{-0.080}$	$\sigma_8(0.57)$	0.6265	$0.627^{+0.026}_{-0.026}$
$A_{143 \times 217}^{\text{PS}}$	37.2	$40^{+20}_{-20}$	$z_{\text{re}}$	10.13	$9.8^{+3.1}_{-3.2}$	$f_{2000}^{143}$	29.1	$30^{+5}_{-5}$
$A_{217}^{\text{PS}}$	99.3	$98^{+20}_{-20}$	$10^9 A_s$	2.208	$2.20^{+0.15}_{-0.14}$	$f_{2000}^{143 \times 217}$	32.04	$32^{+4}_{-4}$
$A^{\text{kSZ}}$	0.00	$< 7.88$	$10^9 A_s e^{-2\tau}$	1.8820	$1.884^{+0.023}_{-0.023}$	$f_{2000}^{217}$	105.63	$105.8^{+3.7}_{-3.6}$
$A_{100}^{\text{dust}TT}$	7.38	$7.4^{+3.7}_{-3.7}$	$D_{40}$	1239.1	$1242^{+25}_{-25}$	$\chi_{\text{lowTEB}}^2$	10496.89	$10497.6 (\nu: 2.0)$
$A_{143}^{\text{dust}TT}$	8.93	$8.9^{+3.6}_{-3.6}$	$D_{220}$	5727	$5729^{+76}_{-76}$	$\chi_{\text{plik}}^2$	2431.1	$2450.2 (\nu: 22.4)$
$A_{143 \times 217}^{\text{dust}TT}$	17.4	$16.9^{+8.1}_{-8.1}$	$D_{810}$	2535.3	$2536^{+26}_{-26}$	$\chi_{\text{H070p6}}^2$	0.56	$0.62 (\nu: 0.1)$
$A_{217}^{\text{dust}TT}$	81.7	$82^{+10}_{-10}$	$D_{1420}$	814.7	$814.4^{+9.3}_{-9.3}$	$\chi_{\text{JLA}}^2$	695.04	$698.0 (\nu: 2.9)$
$A_{100}^{\text{dust}EE}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{2000}$	230.55	$230.4^{+3.1}_{-3.2}$	$\chi_{6\text{DF}}^2$	0.000	$0.07 (\nu: 0.0)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0488	$0.0486^{+0.0099}_{-0.0098}$	$n_{s,0.002}$	0.9650	$0.9637^{+0.0091}_{-0.0090}$	$\chi_{\text{MGS}}^2$	1.75	$1.91 (\nu: 0.3)$
$A_{100 \times 217}^{\text{dust}EE}$	0.0997	$0.099^{+0.065}_{-0.063}$	$Y_P$	0.245345	$0.24533^{+0.00013}_{-0.00014}$	$\chi_{\text{DR11CMass}}^2$	2.66	$3.4 (\nu: 0.7)$
$A_{143}^{\text{dust}EE}$	0.1002	$0.0999^{+0.013}_{-0.013}$	$Y_P^{\text{BBN}}$	0.246671	$0.24666^{+0.00013}_{-0.00014}$	$\chi_{\text{DR11LOWZ}}^2$	0.20	$0.37 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.223^{+0.091}_{-0.091}$	$10^5 D/H$	2.612	$2.617^{+0.057}_{-0.055}$	$\chi_{\text{prior}}^2$	7.0	$19.2 (\nu: 15.0)$
$A_{217}^{\text{dust}EE}$	0.648	$0.65^{+0.26}_{-0.26}$	$\text{Age/Gyr}$	13.773	$13.771^{+0.066}_{-0.063}$	$\chi_{\text{CMB}}^2$	12928.0	$12947.7 (\nu: 22.0)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.074}_{-0.074}$	$z_*$	1090.04	$1090.10^{+0.55}_{-0.54}$	$\chi_{\text{BAO}}^2$	4.61	$5.8 (\nu: 1.7)$
$A_{100 \times 143}^{\text{dust}TE}$	0.131	$0.131^{+0.058}_{-0.057}$	$r_*$	144.57	$144.50^{+0.61}_{-0.62}$			

Best-fit  $\chi_{\text{eff}}^2 = 13635.20$ ;  $\bar{\chi}_{\text{eff}}^2 = 13671.28$ ;  $R - 1 = 0.01182$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.75 DR11CMass: 2.66 DR11LOWZ: 0.20 CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10496.89 plik\_dx11dr2\_HM\_v18\_TTTEEE:  
2431.11 Hubble - H070p6: 0.56 SN - JLA December\_2013: 695.04



## 22.8 base\_w\_wa\_plikHM\_TTTEE\_lowTEB\_BAO\_H070p6\_JLA\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022269	$0.02225^{+0.00030}_{-0.00029}$	$A_{100 \times 217}^{\text{dust}TE}$	0.303	$0.30^{+0.16}_{-0.17}$	$100\theta_*$	1.04107	$1.04104^{+0.00062}_{-0.00066}$
$\Omega_c h^2$	0.11916	$0.1194^{+0.0027}_{-0.0027}$	$A_{143}^{\text{dust}TE}$	0.156	$0.16^{+0.10}_{-0.11}$	$D_A/\text{Gpc}$	13.902	$13.896^{+0.051}_{-0.055}$
$100\theta_{\text{MC}}$	1.04087	$1.04084^{+0.00063}_{-0.00067}$	$A_{143 \times 217}^{\text{dust}TE}$	0.340	$0.34^{+0.15}_{-0.15}$	$z_{\text{drag}}$	1059.63	$1059.62^{+0.58}_{-0.60}$
$\tau$	0.0625	$0.060^{+0.029}_{-0.029}$	$A_{217}^{\text{dust}TE}$	1.67	$1.66^{+0.50}_{-0.50}$	$r_{\text{drag}}$	147.43	$147.37^{+0.56}_{-0.57}$
$w$	-0.976	$-0.95^{+0.21}_{-0.20}$	$c_{100}$	0.99817	$0.9981^{+0.0015}_{-0.0015}$	$k_D$	0.14044	$0.14048^{+0.00063}_{-0.00060}$
$w_a$	-0.14	$-0.25^{+0.68}_{-0.80}$	$c_{217}$	0.99605	$0.9961^{+0.0027}_{-0.0028}$	$100\theta_D$	0.160917	$0.16093^{+0.00034}_{-0.00034}$
$\ln(10^{10} A_s)$	3.057	$3.053^{+0.053}_{-0.054}$	$H_0$	67.94	$68.0^{+2.0}_{-2.0}$	$z_{\text{eq}}$	3380	$3386^{+61}_{-60}$
$n_s$	0.9660	$0.9649^{+0.0090}_{-0.0087}$	$\Omega_\Lambda$	0.6922	$0.692^{+0.019}_{-0.019}$	$k_{\text{eq}}$	0.010315	$0.01033^{+0.00019}_{-0.00018}$
$y_{\text{cal}}$	1.00003	$1.0002^{+0.0047}_{-0.0049}$	$\Omega_m$	0.3078	$0.308^{+0.019}_{-0.019}$	$100\theta_{\text{eq}}$	0.8170	$0.816^{+0.011}_{-0.011}$
$\alpha_{JLA}$	0.1411	$0.142^{+0.013}_{-0.012}$	$\Omega_m h^2$	0.14208	$0.1423^{+0.0025}_{-0.0025}$	$100\theta_{s,\text{eq}}$	0.4514	$0.4508^{+0.0059}_{-0.0059}$
$\beta_{JLA}$	3.098	$3.10^{+0.17}_{-0.16}$	$\Omega_m h^3$	0.09652	$0.0967^{+0.0036}_{-0.0034}$	$r_{\text{drag}}/D_V(0.57)$	0.07190	$0.0720^{+0.0010}_{-0.00099}$
$A_{217}^{\text{CIB}}$	67.9	$65^{+10}_{-10}$	$\sigma_8$	0.8190	$0.820^{+0.025}_{-0.025}$	$H(0.57)$	93.18	$93.2^{+1.1}_{-1.1}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\sigma_8 \Omega_m^{0.5}$	0.4544	$0.455^{+0.012}_{-0.012}$	$D_A(0.57)$	1381.0	$1379^{+22}_{-23}$
$A_{143}^{\text{tSZ}}$	7.28	$5.2^{+3.8}_{-3.7}$	$\sigma_8 \Omega_m^{0.25}$	0.6101	$0.611^{+0.015}_{-0.014}$	$F_{\text{AP}}(0.57)$	0.6739	$0.6732^{+0.0085}_{-0.0088}$
$A_{100}^{\text{PS}}$	258	$263^{+50}_{-50}$	$\sigma_8/h^{0.5}$	0.9937	$0.994^{+0.022}_{-0.021}$	$f\sigma_8(0.57)$	0.4760	$0.477^{+0.020}_{-0.019}$
$A_{143}^{\text{PS}}$	38.7	$44^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.4578	$2.460^{+0.049}_{-0.050}$	$\sigma_8(0.57)$	0.6103	$0.611^{+0.019}_{-0.019}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$z_{\text{re}}$	8.50	$8.2^{+2.7}_{-3.1}$	$f_{2000}^{143}$	29.85	$30^{+5}_{-5}$
$A_{217}^{\text{PS}}$	96.5	$96^{+20}_{-20}$	$10^9 A_s$	2.127	$2.12^{+0.11}_{-0.11}$	$f_{2000}^{143 \times 217}$	32.56	$33^{+4}_{-4}$
$A^{\text{kSZ}}$	0.00	$< 8.29$	$10^9 A_s e^{-2\tau}$	1.8771	$1.879^{+0.022}_{-0.022}$	$f_{2000}^{217}$	106.08	$106.2^{+3.5}_{-3.3}$
$A_{100}^{\text{dust}TT}$	7.60	$7.5^{+3.8}_{-3.7}$	$D_{40}$	1228.7	$1232^{+22}_{-21}$	$\chi_{\text{lensing}}^2$	9.89	$10.7 (\nu: 2.0)$
$A_{143}^{\text{dust}TT}$	9.11	$9.0^{+3.5}_{-3.5}$	$D_{220}$	5722	$5727^{+75}_{-75}$	$\chi_{\text{lowTEB}}^2$	10495.18	$10495.9 (\nu: 0.7)$
$A_{143 \times 217}^{\text{dust}TT}$	17.6	$17.2^{+8.5}_{-8.2}$	$D_{810}$	2533.4	$2535^{+26}_{-27}$	$\chi_{\text{plik}}^2$	2434.8	$2453.2 (\nu: 22.0)$
$A_{217}^{\text{dust}TT}$	81.7	$81^{+20}_{-10}$	$D_{1420}$	814.7	$814.7^{+9.4}_{-9.1}$	$\chi_{\text{H070p6}}^2$	0.63	$0.69 (\nu: 0.1)$
$A_{100}^{\text{dust}EE}$	0.0814	$0.081^{+0.011}_{-0.011}$	$D_{2000}$	230.08	$230.0^{+3.0}_{-3.1}$	$\chi_{\text{JLA}}^2$	695.11	$698.0 (\nu: 2.7)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0489	$0.0490^{+0.0098}_{-0.0097}$	$n_{s,0.002}$	0.9660	$0.9649^{+0.0090}_{-0.0087}$	$\chi_{\text{6DF}}^2$	0.001	$0.07 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.099	$0.099^{+0.067}_{-0.064}$	$Y_P$	0.245348	$0.24534^{+0.00013}_{-0.00014}$	$\chi_{\text{MGS}}^2$	1.61	$1.78 (\nu: 0.3)$
$A_{143}^{\text{dust}EE}$	0.1004	$0.100^{+0.014}_{-0.014}$	$Y_P^{\text{BBN}}$	0.246675	$0.24666^{+0.00013}_{-0.00014}$	$\chi_{\text{DR11CMass}}^2$	2.51	$3.3 (\nu: 0.6)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.223^{+0.092}_{-0.093}$	$10^5 D/H$	2.610	$2.614^{+0.057}_{-0.056}$	$\chi_{\text{DR11LOWZ}}^2$	0.30	$0.44 (\nu: 0.1)$
$A_{217}^{\text{dust}EE}$	0.646	$0.66^{+0.25}_{-0.26}$	$\text{Age/Gyr}$	13.785	$13.781^{+0.065}_{-0.063}$	$\chi_{\text{prior}}^2$	7.2	$19.2 (\nu: 15.5)$
$A_{100}^{\text{dust}TE}$	0.141	$0.141^{+0.079}_{-0.070}$	$z_*$	1089.97	$1090.02^{+0.54}_{-0.55}$	$\chi_{\text{CMB}}^2$	12939.9	$12959.8 (\nu: 21.6)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.058}_{-0.058}$	$r_*$	144.72	$144.67^{+0.58}_{-0.58}$	$\chi_{\text{BAO}}^2$	4.42	$5.6 (\nu: 1.4)$

Best-fit  $\chi_{\text{eff}}^2 = 13647.22$ ;  $\bar{\chi}_{\text{eff}}^2 = 13683.14$ ;  $R - 1 = 0.04505$

$\chi^2_{\text{eff}}$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMASS: 2.51 DR11LOWZ: 0.30 CMB - smica\_g30\_ftl\_full\_pp: 9.89 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.18 plik\_dx11dr2\_HM\_v18\_TT+  
2434.83 Hubble - H070p6: 0.63 SN - JLA December\_2013: 695.11

## 23 yhe

### 23.1 base\_yhe\_plikHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02226	$0.02231^{+0.00069}_{-0.00064}$	$\Omega_\Lambda$	0.6856	$0.688^{+0.031}_{-0.032}$	$100\theta_*$	1.04108	$1.0411^{+0.0010}_{-0.0010}$
$\Omega_c h^2$	0.11974	$0.1194^{+0.0046}_{-0.0047}$	$\Omega_m$	0.3144	$0.312^{+0.032}_{-0.031}$	$D_A/\text{Gpc}$	13.887	$13.890^{+0.089}_{-0.087}$
$100\theta_{\text{MC}}$	1.04095	$1.0411^{+0.0019}_{-0.0018}$	$\Omega_m h^2$	0.14264	$0.1424^{+0.0042}_{-0.0042}$	$z_{\text{drag}}$	1059.74	$1060.0^{+2.6}_{-2.5}$
$\tau$	0.0773	$0.081^{+0.043}_{-0.041}$	$\Omega_m h^3$	0.09609	$0.0962^{+0.0017}_{-0.0016}$	$r_{\text{drag}}$	147.28	$147.30^{+0.97}_{-0.95}$
$Y_P$	0.2478	$0.252^{+0.041}_{-0.042}$	$\sigma_8$	0.8299	$0.832^{+0.035}_{-0.032}$	$k_D$	0.14048	$0.1403^{+0.0015}_{-0.0015}$
$\ln(10^{10} A_s)$	3.090	$3.096^{+0.086}_{-0.081}$	$\sigma_8 \Omega_m^{0.5}$	0.4653	$0.465^{+0.026}_{-0.026}$	$100\theta_D$	0.16103	$0.1612^{+0.0015}_{-0.0015}$
$n_s$	0.9666	$0.969^{+0.025}_{-0.023}$	$\sigma_8 \Omega_m^{0.25}$	0.6214	$0.622^{+0.026}_{-0.026}$	$z_{\text{eq}}$	3393	$3387^{+100}_{-100}$
$y_{\text{cal}}$	1.00039	$1.0004^{+0.0049}_{-0.0049}$	$\sigma_8/h^{0.5}$	1.0111	$1.012^{+0.039}_{-0.039}$	$k_{\text{eq}}$	0.010357	$0.01034^{+0.00031}_{-0.00031}$
$A_{217}^{\text{CIB}}$	67.2	$64^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.496	$2.495^{+0.090}_{-0.093}$	$100\theta_{\text{eq}}$	0.8146	$0.816^{+0.021}_{-0.020}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.01	—	$z_{\text{re}}$	9.93	$10.1^{+3.6}_{-4.0}$	$100\theta_{\text{s,eq}}$	0.4501	$0.451^{+0.010}_{-0.010}$
$A_{143}^{\text{tSZ}}$	7.15	$5.0^{+3.7}_{-3.9}$	$10^9 A_s$	2.197	$2.21^{+0.19}_{-0.19}$	$r_{\text{drag}}/D_V(0.57)$	0.07142	$0.0716^{+0.0018}_{-0.0017}$
$A_{100}^{\text{PS}}$	254	$260^{+60}_{-60}$	$10^9 A_s e^{-2\tau}$	1.8819	$1.882^{+0.030}_{-0.030}$	$H(0.57)$	92.92	$93.0^{+1.3}_{-1.3}$
$A_{143}^{\text{PS}}$	39.2	$45^{+20}_{-20}$	$D_{40}$	1234.6	$1233^{+42}_{-41}$	$D_A(0.57)$	1390.8	$1388^{+34}_{-35}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{220}$	5718	$5719^{+80}_{-78}$	$F_{\text{AP}}(0.57)$	0.6768	$0.6761^{+0.0080}_{-0.0079}$
$A_{217}^{\text{PS}}$	97.8	$97^{+20}_{-20}$	$D_{810}$	2535.3	$2535^{+28}_{-28}$	$f\sigma_8(0.57)$	0.4832	$0.484^{+0.019}_{-0.019}$
$A^{\text{kSZ}}$	0.0	—	$D_{1420}$	814.7	$814^{+10}_{-10}$	$\sigma_8(0.57)$	0.6167	$0.619^{+0.029}_{-0.027}$
$A_{100}^{\text{dustTT}}$	7.46	$7.5^{+3.7}_{-3.7}$	$D_{2000}$	230.24	$229.9^{+4.7}_{-4.7}$	$f_{2000}^{143}$	29.9	$31^{+7}_{-7}$
$A_{143}^{\text{dustTT}}$	8.97	$9.0^{+3.6}_{-3.6}$	$n_{\text{s},0.002}$	0.9666	$0.969^{+0.025}_{-0.023}$	$f_{2000}^{143 \times 217}$	32.5	$33^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.5	$17.1^{+8.1}_{-8.2}$	$Y_P$	0.2478	$0.252^{+0.041}_{-0.042}$	$f_{2000}^{217}$	106.2	$106.5^{+5.2}_{-5.2}$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$Y_P^{\text{BBN}}$	0.2491	$0.253^{+0.041}_{-0.042}$	$\chi_{\text{lowTEB}}^2$	10496.2	$10497.3 (\nu: 3.8)$
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$	Age/Gyr	13.807	$13.80^{+0.13}_{-0.13}$	$\chi_{\text{plik}}^2$	763.6	$778.1 (\nu: 17.7)$
$c_{217}$	0.99598	$0.9960^{+0.0029}_{-0.0028}$	$z_*$	1090.14	$1090.2^{+1.3}_{-1.2}$	$\chi_{\text{prior}}^2$	2.1	$7.4 (\nu: 6.3)$
$H_0$	67.36	$67.6^{+2.5}_{-2.4}$	$r_*$	144.58	$144.61^{+0.96}_{-0.94}$	$\chi_{\text{CMB}}^2$	11259.9	$11275.5 (\nu: 16.1)$

Best-fit  $\chi_{\text{eff}}^2 = 11261.91$ ;  $\bar{\chi}_{\text{eff}}^2 = 11282.84$ ;  $R - 1 = 0.00920$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.23 plik\_dx11dr2\_HM\_v18\_TT: 763.62

## 23.2 base\_yhe\_plikHM\_TT\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02235	$0.02235^{+0.00052}_{-0.00049}$	$\Omega_m h^2$	0.14199	$0.1420^{+0.0024}_{-0.0024}$	$k_D$	0.14023	$0.1402^{+0.0011}_{-0.0012}$
$\Omega_c h^2$	0.11900	$0.1190^{+0.0025}_{-0.0024}$	$\Omega_m h^3$	0.09624	$0.0963^{+0.0015}_{-0.0015}$	$100\theta_D$	0.16123	$0.1613^{+0.0014}_{-0.0014}$
$100\theta_{MC}$	1.04120	$1.0412^{+0.0015}_{-0.0015}$	$\sigma_8$	0.8321	$0.833^{+0.034}_{-0.032}$	$z_{eq}$	3378	$3378^{+58}_{-57}$
$\tau$	0.0819	$0.083^{+0.037}_{-0.037}$	$\sigma_8 \Omega_m^{0.5}$	0.4626	$0.463^{+0.020}_{-0.020}$	$k_{eq}$	0.010309	$0.01031^{+0.00018}_{-0.00017}$
$Y_P$	0.2537	$0.254^{+0.036}_{-0.038}$	$\sigma_8 \Omega_m^{0.25}$	0.6204	$0.621^{+0.025}_{-0.024}$	$100\theta_{eq}$	0.8179	$0.818^{+0.011}_{-0.011}$
$\ln(10^{10} A_s)$	3.098	$3.100^{+0.077}_{-0.075}$	$\sigma_8/h^{0.5}$	1.0107	$1.011^{+0.040}_{-0.038}$	$100\theta_{s,eq}$	0.4518	$0.4518^{+0.0055}_{-0.0055}$
$n_s$	0.9709	$0.971^{+0.017}_{-0.017}$	$\langle d^2 \rangle^{1/2}$	2.489	$2.492^{+0.084}_{-0.086}$	$r_{drag}/D_V(0.57)$	0.07171	$0.07173^{+0.00088}_{-0.00086}$
$y_{cal}$	1.00030	$1.0005^{+0.0049}_{-0.0049}$	$z_{re}$	10.34	$10.3^{+3.2}_{-3.5}$	$H(0.57)$	93.12	$93.14^{+0.77}_{-0.75}$
$A_{217}^{CIB}$	67.7	$65^{+10}_{-10}$	$10^9 A_s$	2.215	$2.22^{+0.18}_{-0.16}$	$D_A(0.57)$	1385.0	$1385^{+18}_{-18}$
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8806	$1.882^{+0.030}_{-0.029}$	$F_{AP}(0.57)$	0.67541	$0.6754^{+0.0040}_{-0.0039}$
$A_{143}^{tSZ}$	7.12	$5.0^{+3.8}_{-3.9}$	$D_{40}$	1227.6	$1230^{+33}_{-32}$	$f\sigma_8(0.57)$	0.4831	$0.484^{+0.019}_{-0.019}$
$A_{100}^{PS}$	257	$261^{+60}_{-60}$	$D_{220}$	5716	$5721^{+79}_{-78}$	$\sigma_8(0.57)$	0.6196	$0.620^{+0.027}_{-0.025}$
$A_{143}^{PS}$	40.5	$45^{+20}_{-20}$	$D_{810}$	2534.7	$2535^{+28}_{-28}$	$f_{2000}^{143}$	30.5	$31^{+7}_{-7}$
$A_{143 \times 217}^{PS}$	33	$39^{+20}_{-20}$	$D_{1420}$	814.2	$814^{+10}_{-10}$	$f_{2000}^{143 \times 217}$	33.0	$33^{+6}_{-6}$
$A_{217}^{PS}$	97.6	$97^{+20}_{-20}$	$D_{2000}$	229.85	$229.8^{+4.7}_{-4.7}$	$f_{2000}^{217}$	106.5	$106.7^{+5.1}_{-5.2}$
$A^{kSZ}$	0.0	—	$n_{s,0.002}$	0.9709	$0.971^{+0.017}_{-0.017}$	$\chi_{lowTEB}^2$	10495.83	$10496.9 (\nu: 3.3)$
$A_{100}^{dustTT}$	7.41	$7.5^{+3.7}_{-3.8}$	$Y_P$	0.2537	$0.254^{+0.036}_{-0.038}$	$\chi_{plik}^2$	764.2	$777.9 (\nu: 17.3)$
$A_{143}^{dustTT}$	9.10	$9.0^{+3.6}_{-3.6}$	$Y_P^{BBN}$	0.2551	$0.255^{+0.036}_{-0.038}$	$\chi_{6DF}^2$	0.015	$0.058 (\nu: 0.0)$
$A_{143 \times 217}^{dustTT}$	17.7	$17.2^{+7.9}_{-8.1}$	Age/Gyr	13.787	$13.785^{+0.089}_{-0.090}$	$\chi_{MGS}^2$	1.34	$1.44 (\nu: 0.2)$
$A_{217}^{dustTT}$	81.8	$82^{+10}_{-10}$	$z_*$	1090.20	$1090.2^{+1.3}_{-1.3}$	$\chi_{DR11CMass}^2$	2.42	$2.91 (\nu: 0.3)$
$c_{100}$	0.99793	$0.9979^{+0.0016}_{-0.0015}$	$r_*$	144.68	$144.68^{+0.73}_{-0.73}$	$\chi_{DR11LOWZ}^2$	0.54	$0.68 (\nu: 0.2)$
$c_{217}$	0.99595	$0.9960^{+0.0028}_{-0.0029}$	$100\theta_*$	1.04117	$1.04120^{+0.00084}_{-0.00083}$	$\chi_{prior}^2$	2.0	$7.5 (\nu: 6.5)$
$H_0$	67.78	$67.8^{+1.3}_{-1.3}$	$D_A/Gpc$	13.896	$13.895^{+0.073}_{-0.073}$	$\chi_{CMB}^2$	11260.0	$11274.8 (\nu: 15.4)$
$\Omega_\Lambda$	0.6909	$0.691^{+0.015}_{-0.016}$	$z_{drag}$	1060.09	$1060.1^{+2.2}_{-2.1}$	$\chi_{BAO}^2$	4.33	$5.1 (\nu: 0.6)$
$\Omega_m$	0.3091	$0.309^{+0.016}_{-0.015}$	$r_{drag}$	147.36	$147.36^{+0.82}_{-0.83}$			

Best-fit  $\chi_{eff}^2 = 11266.31$ ;  $\bar{\chi}_{eff}^2 = 11287.38$ ;  $R - 1 = 0.01718$

$\chi_{eff}^2$ : BAO - 6DF: 0.01 MGS: 1.34 DR11CMass: 2.42 DR11LOWZ: 0.54 CMB - lowl.SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10495.83 plik\_dx11dr2\_HM\_v18\_TT: 764.16

### 23.3 base\_yhe\_plikHM\_TT\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02233	$0.02236^{+0.00064}_{-0.00061}$	$\Omega_m$	0.3104	$0.309^{+0.029}_{-0.028}$	$z_{\text{drag}}$	1059.97	$1060.1^{+2.5}_{-2.4}$
$\Omega_c h^2$	0.11919	$0.1190^{+0.0042}_{-0.0042}$	$\Omega_m h^2$	0.14216	$0.1420^{+0.0038}_{-0.0039}$	$r_{\text{drag}}$	147.33	$147.35^{+0.94}_{-0.91}$
$100\theta_{\text{MC}}$	1.04112	$1.0413^{+0.0018}_{-0.0017}$	$\Omega_m h^3$	0.09621	$0.0963^{+0.0016}_{-0.0016}$	$k_D$	0.14035	$0.1402^{+0.0014}_{-0.0014}$
$\tau$	0.0818	$0.083^{+0.042}_{-0.040}$	$\sigma_8$	0.8321	$0.833^{+0.035}_{-0.032}$	$100\theta_D$	0.16111	$0.1613^{+0.0015}_{-0.0015}$
$Y_P$	0.2511	$0.254^{+0.040}_{-0.041}$	$\sigma_8 \Omega_m^{0.5}$	0.4636	$0.463^{+0.024}_{-0.024}$	$z_{\text{eq}}$	3382	$3377^{+92}_{-93}$
$\ln(10^{10} A_s)$	3.098	$3.100^{+0.084}_{-0.081}$	$\sigma_8 \Omega_m^{0.25}$	0.6211	$0.621^{+0.026}_{-0.025}$	$k_{\text{eq}}$	0.010322	$0.01031^{+0.00028}_{-0.00028}$
$n_s$	0.9695	$0.971^{+0.023}_{-0.022}$	$\sigma_8/h^{0.5}$	1.0115	$1.011^{+0.040}_{-0.038}$	$100\theta_{\text{eq}}$	0.8170	$0.818^{+0.019}_{-0.018}$
$y_{\text{cal}}$	1.00032	$1.0004^{+0.0049}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.494	$2.491^{+0.089}_{-0.091}$	$100\theta_{\text{s,eq}}$	0.4513	$0.4519^{+0.0096}_{-0.0091}$
$A_{217}^{\text{CIB}}$	67.3	$65^{+10}_{-10}$	$z_{\text{re}}$	10.33	$10.3^{+3.5}_{-3.9}$	$r_{\text{drag}}/D_V(0.57)$	0.07164	$0.0717^{+0.0016}_{-0.0015}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.215	$2.22^{+0.19}_{-0.17}$	$H(0.57)$	93.07	$93.2^{+1.2}_{-1.1}$
$A_{143}^{\text{tSZ}}$	7.24	$5.0^{+3.7}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8805	$1.882^{+0.030}_{-0.030}$	$D_A(0.57)$	1386.5	$1384^{+31}_{-32}$
$A_{100}^{\text{PS}}$	252	$260^{+60}_{-60}$	$D_{40}$	1230.5	$1230^{+40}_{-39}$	$F_{\text{AP}}(0.57)$	0.6758	$0.6754^{+0.0072}_{-0.0072}$
$A_{143}^{\text{PS}}$	39.2	$45^{+20}_{-20}$	$D_{220}$	5718	$5721^{+79}_{-78}$	$f\sigma_8(0.57)$	0.4835	$0.483^{+0.019}_{-0.019}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{810}$	2534.8	$2535^{+28}_{-28}$	$\sigma_8(0.57)$	0.6193	$0.620^{+0.028}_{-0.026}$
$A_{217}^{\text{PS}}$	97.6	$97^{+20}_{-20}$	$D_{1420}$	814.6	$814^{+10}_{-10}$	$f_{2000}^{143}$	30.0	$31^{+7}_{-7}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.16	$229.8^{+4.7}_{-4.8}$	$f_{2000}^{143 \times 217}$	32.6	$33^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.52	$7.5^{+3.7}_{-3.7}$	$n_{\text{s},0.002}$	0.9695	$0.971^{+0.023}_{-0.022}$	$f_{2000}^{217}$	106.2	$106.6^{+5.2}_{-5.2}$
$A_{143}^{\text{dustTT}}$	9.15	$9.1^{+3.6}_{-3.6}$	$Y_P$	0.2511	$0.254^{+0.040}_{-0.041}$	$\chi_{\text{lowTEB}}^2$	10496.1	$10497.1 (\nu: 3.7)$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.2^{+8.0}_{-8.2}$	$Y_P^{\text{BBN}}$	0.2524	$0.255^{+0.040}_{-0.041}$	$\chi_{\text{plik}}^2$	763.7	$778.2 (\nu: 17.8)$
$A_{217}^{\text{dustTT}}$	81.8	$82^{+10}_{-10}$	Age/Gyr	13.792	$13.78^{+0.12}_{-0.12}$	$\chi_{\text{JLA}}^2$	706.72	$706.85 (\nu: 0.1)$
$c_{100}$	0.99792	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1090.13	$1090.2^{+1.3}_{-1.3}$	$\chi_{\text{prior}}^2$	2.1	$7.5 (\nu: 6.4)$
$c_{217}$	0.99591	$0.9960^{+0.0029}_{-0.0029}$	$r_*$	144.65	$144.68^{+0.92}_{-0.89}$	$\chi_{\text{CMB}}^2$	11259.8	$11275.3 (\nu: 15.8)$
$H_0$	67.67	$67.8^{+2.3}_{-2.2}$	$100\theta_*$	1.04116	$1.0412^{+0.0010}_{-0.00098}$			
$\Omega_\Lambda$	0.6896	$0.691^{+0.028}_{-0.029}$	$D_A/\text{Gpc}$	13.893	$13.895^{+0.087}_{-0.083}$			

Best-fit  $\chi_{\text{eff}}^2 = 11968.66$ ;  $\bar{\chi}_{\text{eff}}^2 = 11989.60$ ;  $R - 1 = 0.01367$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.12 plik\_dx11dr2\_HM\_v18\_TT: 763.71 SN - JLA December\_2013: 706.72

### 23.4 base\_yhe\_plikHM\_TT\_lowTEB\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02230	$0.02232^{+0.00065}_{-0.00062}$	$\Omega_m$	0.3063	$0.306^{+0.029}_{-0.029}$	$z_{\text{drag}}$	1059.74	$1059.9^{+2.5}_{-2.4}$
$\Omega_c h^2$	0.11839	$0.1183^{+0.0042}_{-0.0045}$	$\Omega_m h^2$	0.14133	$0.1413^{+0.0038}_{-0.0041}$	$r_{\text{drag}}$	147.59	$147.58^{+0.94}_{-0.89}$
$100\theta_{\text{MC}}$	1.04113	$1.0412^{+0.0018}_{-0.0019}$	$\Omega_m h^3$	0.09601	$0.0961^{+0.0016}_{-0.0015}$	$k_D$	0.14019	$0.1401^{+0.0014}_{-0.0015}$
$\tau$	0.0681	$0.068^{+0.038}_{-0.035}$	$\sigma_8$	0.8169	$0.817^{+0.024}_{-0.023}$	$100\theta_D$	0.16104	$0.1612^{+0.0015}_{-0.0015}$
$Y_P$	0.2476	$0.251^{+0.040}_{-0.039}$	$\sigma_8 \Omega_m^{0.5}$	0.4521	$0.452^{+0.017}_{-0.018}$	$z_{\text{eq}}$	3362	$3361^{+91}_{-98}$
$\ln(10^{10} A_s)$	3.067	$3.067^{+0.072}_{-0.068}$	$\sigma_8 \Omega_m^{0.25}$	0.6077	$0.607^{+0.015}_{-0.015}$	$k_{\text{eq}}$	0.010261	$0.01026^{+0.00028}_{-0.00030}$
$n_s$	0.9694	$0.970^{+0.024}_{-0.024}$	$\sigma_8/h^{0.5}$	0.9911	$0.991^{+0.023}_{-0.023}$	$100\theta_{\text{eq}}$	0.8205	$0.821^{+0.020}_{-0.019}$
$y_{\text{cal}}$	1.00013	$1.0001^{+0.0048}_{-0.0050}$	$\langle d^2 \rangle^{1/2}$	2.448	$2.445^{+0.055}_{-0.056}$	$100\theta_{s,\text{eq}}$	0.4532	$0.4534^{+0.0099}_{-0.0099}$
$A_{217}^{\text{CIB}}$	67.6	$65^{+10}_{-10}$	$z_{\text{re}}$	9.04	$9.0^{+3.3}_{-3.6}$	$r_{\text{drag}}/D_V(0.57)$	0.07188	$0.0719^{+0.0017}_{-0.0017}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$10^9 A_s$	2.148	$2.15^{+0.16}_{-0.14}$	$H(0.57)$	93.13	$93.2^{+1.3}_{-1.2}$
$A_{143}^{\text{tSZ}}$	7.18	$4.9^{+3.8}_{-3.9}$	$10^9 A_s e^{-2\tau}$	1.8742	$1.875^{+0.029}_{-0.028}$	$D_A(0.57)$	1383.4	$1382^{+32}_{-33}$
$A_{100}^{\text{PS}}$	255	$262^{+60}_{-60}$	$D_{40}$	1223.0	$1223^{+38}_{-39}$	$F_{\text{AP}}(0.57)$	0.6747	$0.6746^{+0.0074}_{-0.0075}$
$A_{143}^{\text{PS}}$	39.8	$45^{+20}_{-20}$	$D_{220}$	5716	$5716^{+80}_{-78}$	$f\sigma_8(0.57)$	0.4736	$0.473^{+0.011}_{-0.011}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$D_{810}$	2532.7	$2533^{+27}_{-27}$	$\sigma_8(0.57)$	0.6090	$0.609^{+0.023}_{-0.021}$
$A_{217}^{\text{PS}}$	97.2	$96^{+20}_{-20}$	$D_{1420}$	814.8	$814^{+10}_{-10}$	$f_{2000}^{143}$	30.2	$31^{+7}_{-7}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.07	$229.6^{+4.7}_{-4.8}$	$f_{2000}^{143 \times 217}$	32.8	$33^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.40	$7.5^{+3.6}_{-3.6}$	$n_{s,0.002}$	0.9694	$0.970^{+0.024}_{-0.024}$	$f_{2000}^{217}$	106.3	$106.8^{+5.2}_{-5.3}$
$A_{143}^{\text{dustTT}}$	9.11	$9.2^{+3.6}_{-3.6}$	$Y_P$	0.2476	$0.251^{+0.040}_{-0.039}$	$\chi^2_{\text{lensing}}$	9.28	$9.9 (\nu: 1.2)$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.4^{+7.9}_{-7.9}$	$Y_P^{\text{BBN}}$	0.2490	$0.252^{+0.041}_{-0.039}$	$\chi^2_{\text{lowTEB}}$	10494.73	$10495.5 (\nu: 1.8)$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	Age/Gyr	13.792	$13.79^{+0.12}_{-0.13}$	$\chi^2_{\text{plik}}$	766.3	$780.5 (\nu: 17.4)$
$c_{100}$	0.99790	$0.9979^{+0.0016}_{-0.0015}$	$z_*$	1089.96	$1090.1^{+1.2}_{-1.2}$	$\chi^2_{\text{prior}}$	2.1	$7.5 (\nu: 6.8)$
$c_{217}$	0.99594	$0.9961^{+0.0029}_{-0.0029}$	$r_*$	144.90	$144.89^{+0.96}_{-0.87}$	$\chi^2_{\text{CMB}}$	11270.3	$11285.9 (\nu: 17.0)$
$H_0$	67.93	$68.0^{+2.5}_{-2.3}$	$100\theta_*$	1.04127	$1.0413^{+0.0010}_{-0.0010}$			
$\Omega_\Lambda$	0.6937	$0.694^{+0.029}_{-0.029}$	$D_A/\text{Gpc}$	13.915	$13.915^{+0.088}_{-0.081}$			

Best-fit  $\chi^2_{\text{eff}} = 11272.42$ ;  $\bar{\chi}^2_{\text{eff}} = 11293.46$ ;  $R - 1 = 0.03263$

$\chi^2_{\text{eff}}$ : CMB - smica\_g30\_ftl\_full\_pp: 9.28 lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.73 plik\_dx11dr2\_HM\_v18.TT: 766.34

### 23.5 base\_yhe\_plikHM\_TT\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02238	$0.02239^{+0.00066}_{-0.00062}$	$\Omega_m$	0.3077	$0.308^{+0.030}_{-0.029}$	$z_{\text{drag}}$	1060.16	$1060.3^{+2.5}_{-2.5}$
$\Omega_c h^2$	0.11882	$0.1188^{+0.0043}_{-0.0044}$	$\Omega_m h^2$	0.14185	$0.1418^{+0.0040}_{-0.0040}$	$r_{\text{drag}}$	147.36	$147.36^{+0.98}_{-0.93}$
$100\theta_{\text{MC}}$	1.04126	$1.0413^{+0.0018}_{-0.0018}$	$\Omega_m h^3$	0.09630	$0.0963^{+0.0016}_{-0.0016}$	$k_D$	0.14025	$0.1402^{+0.0014}_{-0.0015}$
$\tau$	0.0836	$0.084^{+0.043}_{-0.041}$	$\sigma_8$	0.8330	$0.834^{+0.035}_{-0.033}$	$100\theta_D$	0.16119	$0.1613^{+0.0015}_{-0.0015}$
$Y_P$	0.2537	$0.256^{+0.040}_{-0.041}$	$\sigma_8 \Omega_m^{0.5}$	0.4621	$0.462^{+0.025}_{-0.025}$	$z_{\text{eq}}$	3374	$3374^{+96}_{-96}$
$\ln(10^{10} A_s)$	3.101	$3.103^{+0.084}_{-0.081}$	$\sigma_8 \Omega_m^{0.25}$	0.6204	$0.621^{+0.026}_{-0.025}$	$k_{\text{eq}}$	0.010299	$0.01030^{+0.00029}_{-0.00029}$
$n_s$	0.9716	$0.972^{+0.024}_{-0.023}$	$\sigma_8/h^{0.5}$	1.0109	$1.011^{+0.040}_{-0.039}$	$100\theta_{\text{eq}}$	0.8186	$0.819^{+0.020}_{-0.019}$
$y_{\text{cal}}$	1.00041	$1.0005^{+0.0049}_{-0.0049}$	$\langle d^2 \rangle^{1/2}$	2.489	$2.490^{+0.089}_{-0.093}$	$100\theta_{\text{s,eq}}$	0.4522	$0.452^{+0.010}_{-0.0095}$
$A_{217}^{\text{CIB}}$	67.2	$65^{+10}_{-10}$	$z_{\text{re}}$	10.48	$10.5^{+3.5}_{-3.9}$	$r_{\text{drag}}/D_V(0.57)$	0.07179	$0.0718^{+0.0017}_{-0.0016}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.02	—	$10^9 A_s$	2.223	$2.23^{+0.19}_{-0.18}$	$H(0.57)$	93.18	$93.2^{+1.2}_{-1.2}$
$A_{143}^{\text{tSZ}}$	7.16	$5.0^{+3.8}_{-3.8}$	$10^9 A_s e^{-2\tau}$	1.8805	$1.882^{+0.031}_{-0.030}$	$D_A(0.57)$	1383.4	$1383^{+32}_{-33}$
$A_{100}^{\text{PS}}$	254	$261^{+60}_{-60}$	$D_{40}$	1227.2	$1228^{+40}_{-40}$	$F_{\text{AP}}(0.57)$	0.6751	$0.6750^{+0.0075}_{-0.0075}$
$A_{143}^{\text{PS}}$	40.0	$45^{+20}_{-20}$	$D_{220}$	5719	$5722^{+79}_{-78}$	$f\sigma_8(0.57)$	0.4833	$0.484^{+0.020}_{-0.019}$
$A_{143 \times 217}^{\text{PS}}$	34	$40^{+20}_{-20}$	$D_{810}$	2535.6	$2535^{+28}_{-28}$	$\sigma_8(0.57)$	0.6206	$0.621^{+0.028}_{-0.026}$
$A_{217}^{\text{PS}}$	97.8	$97^{+20}_{-20}$	$D_{1420}$	814.9	$814^{+10}_{-10}$	$f_{2000}^{143}$	30.1	$31^{+7}_{-7}$
$A^{\text{kSZ}}$	0.0	—	$D_{2000}$	230.16	$229.8^{+4.7}_{-4.8}$	$f_{2000}^{143 \times 217}$	32.7	$33^{+6}_{-6}$
$A_{100}^{\text{dustTT}}$	7.50	$7.5^{+3.7}_{-3.7}$	$n_{\text{s},0.002}$	0.9716	$0.972^{+0.024}_{-0.023}$	$f_{2000}^{217}$	106.3	$106.7^{+5.2}_{-5.2}$
$A_{143}^{\text{dustTT}}$	8.96	$9.1^{+3.6}_{-3.6}$	$Y_P$	0.2537	$0.256^{+0.040}_{-0.041}$	$\chi_{\text{lowTEB}}^2$	10495.9	$10497.1 (\nu: 3.9)$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.2^{+8.0}_{-8.1}$	$Y_P^{\text{BBN}}$	0.2550	$0.257^{+0.040}_{-0.041}$	$\chi_{\text{plik}}^2$	764.0	$778.3 (\nu: 18.2)$
$A_{217}^{\text{dustTT}}$	82.3	$82^{+10}_{-10}$	Age/Gyr	13.781	$13.78^{+0.12}_{-0.13}$	$\chi_{\text{H070p6}}^2$	0.66	$0.76 (\nu: 0.2)$
$c_{100}$	0.99791	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	1090.14	$1090.2^{+1.3}_{-1.3}$	$\chi_{\text{prior}}^2$	2.1	$7.5 (\nu: 6.4)$
$c_{217}$	0.99603	$0.9960^{+0.0028}_{-0.0029}$	$r_*$	144.70	$144.69^{+0.95}_{-0.92}$	$\chi_{\text{CMB}}^2$	11259.9	$11275.4 (\nu: 16.0)$
$H_0$	67.89	$68.0^{+2.4}_{-2.3}$	$100\theta_*$	1.04123	$1.0412^{+0.0010}_{-0.00099}$			
$\Omega_\Lambda$	0.6923	$0.692^{+0.029}_{-0.030}$	$D_A/\text{Gpc}$	13.897	$13.896^{+0.089}_{-0.085}$			

Best-fit  $\chi_{\text{eff}}^2 = 11262.68$ ;  $\bar{\chi}_{\text{eff}}^2 = 11283.62$ ;  $R - 1 = 0.01383$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.90 plik\_dx11dr2\_HM\_v18\_TT: 763.99 Hubble - H070p6: 0.66

### 23.6 base\_yhe\_plikHM\_TT\_lowTEB\_post\_lensing\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022319	$0.02232^{+0.00049}_{-0.00046}$	$\Omega_m h^3$	0.09608	$0.0961^{+0.0015}_{-0.0014}$	$z_{\text{eq}}$	3362	$3362^{+55}_{-55}$
$\Omega_c h^2$	0.11835	$0.1184^{+0.0024}_{-0.0024}$	$\sigma_8$	0.8166	$0.817^{+0.021}_{-0.020}$	$k_{\text{eq}}$	0.010260	$0.01026^{+0.00017}_{-0.00017}$
$100\theta_{\text{MC}}$	1.04120	$1.0412^{+0.0014}_{-0.0015}$	$\sigma_8 \Omega_m^{0.5}$	0.4515	$0.452^{+0.013}_{-0.013}$	$100\theta_{\text{eq}}$	0.8207	$0.821^{+0.010}_{-0.010}$
$\tau$	0.0676	$0.068^{+0.026}_{-0.026}$	$\sigma_8 \Omega_m^{0.25}$	0.6072	$0.608^{+0.015}_{-0.015}$	$100\theta_{\text{s,eq}}$	0.4533	$0.4533^{+0.0053}_{-0.0052}$
$Y_{\text{P}}$	0.2498	$0.251^{+0.035}_{-0.036}$	$\sigma_8/h^{0.5}$	0.9903	$0.991^{+0.023}_{-0.022}$	$r_{\text{drag}}/D_{\text{V}}(0.57)$	0.07191	$0.07192^{+0.00083}_{-0.00082}$
$\ln(10^{10} A_{\text{s}})$	3.066	$3.067^{+0.049}_{-0.051}$	$\langle d^2 \rangle^{1/2}$	2.444	$2.445^{+0.053}_{-0.054}$	$H(0.57)$	93.17	$93.18^{+0.75}_{-0.72}$
$n_{\text{s}}$	0.9704	$0.970^{+0.016}_{-0.017}$	$z_{\text{re}}$	8.99	$9.0^{+2.3}_{-2.6}$	$D_{\text{A}}(0.57)$	1382.5	$1382^{+18}_{-17}$
$y_{\text{cal}}$	0.9999	$1.0002^{+0.0048}_{-0.0051}$	$10^9 A_{\text{s}}$	2.146	$2.15^{+0.11}_{-0.11}$	$F_{\text{AP}}(0.57)$	0.67456	$0.6746^{+0.0038}_{-0.0037}$
$A_{217}^{\text{CIB}}$	68.1	$65^{+10}_{-10}$	$10^9 A_{\text{s}} e^{-2\tau}$	1.8743	$1.876^{+0.029}_{-0.029}$	$f\sigma_8(0.57)$	0.4733	$0.474^{+0.011}_{-0.011}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$D_{40}$	1220.7	$1222^{+32}_{-30}$	$\sigma_8(0.57)$	0.6089	$0.609^{+0.017}_{-0.017}$
$A_{143}^{\text{tSZ}}$	7.18	$4.9^{+3.8}_{-3.9}$	$D_{220}$	5713	$5718^{+79}_{-79}$	$f_{2000}^{143}$	30.5	$31^{+7}_{-7}$
$A_{100}^{\text{PS}}$	256	$262^{+60}_{-60}$	$D_{810}$	2532.1	$2533^{+29}_{-28}$	$f_{2000}^{143 \times 217}$	33.0	$33^{+5}_{-6}$
$A_{143}^{\text{PS}}$	40.3	$45^{+20}_{-20}$	$D_{1420}$	814.4	$814^{+11}_{-10}$	$f_{2000}^{217}$	106.4	$106.8^{+5.2}_{-5.2}$
$A_{143 \times 217}^{\text{PS}}$	33	$38^{+20}_{-20}$	$D_{2000}$	229.79	$229.5^{+4.6}_{-4.7}$	$\chi_{\text{lensing}}^2$	9.17	$9.9 (\nu: 1.2)$
$A_{217}^{\text{PS}}$	96.8	$96^{+20}_{-20}$	$n_{\text{s},0.002}$	0.9704	$0.970^{+0.016}_{-0.017}$	$\chi_{\text{lowTEB}}^2$	10494.54	$10495.1 (\nu: 1.1)$
$A^{\text{kSZ}}$	0.0	—	$Y_{\text{P}}$	0.2498	$0.251^{+0.035}_{-0.036}$	$\chi_{\text{plik}}^2$	766.6	$780.2 (\nu: 16.4)$
$A_{100}^{\text{dustTT}}$	7.37	$7.5^{+3.6}_{-3.7}$	$Y_{\text{P}}^{\text{BBN}}$	0.2512	$0.253^{+0.035}_{-0.037}$	$\chi_{\text{H070p6}}^2$	0.62	$0.65 (\nu: 0.0)$
$A_{143}^{\text{dustTT}}$	9.15	$9.2^{+3.6}_{-3.6}$	Age/Gyr	13.787	$13.786^{+0.084}_{-0.086}$	$\chi_{\text{JLA}}^2$	706.608	$706.66 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustTT}}$	17.9	$17.4^{+7.7}_{-7.9}$	$z_*$	1090.02	$1090.1^{+1.2}_{-1.2}$	$\chi_{6\text{DF}}^2$	0.001	$0.041 (\nu: 0.0)$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$r_*$	144.88	$144.87^{+0.72}_{-0.72}$	$\chi_{\text{MGS}}^2$	1.61	$1.69 (\nu: 0.2)$
$c_{100}$	0.99790	$0.9979^{+0.0016}_{-0.0015}$	$100\theta_*$	1.04128	$1.04127^{+0.00082}_{-0.00083}$	$\chi_{\text{DR11CMass}}^2$	2.44	$2.88 (\nu: 0.2)$
$c_{217}$	0.99601	$0.9961^{+0.0028}_{-0.0029}$	$D_{\text{A}}/\text{Gpc}$	13.914	$13.913^{+0.070}_{-0.073}$	$\chi_{\text{DR11LOWZ}}^2$	0.32	$0.45 (\nu: 0.1)$
$H_0$	67.99	$68.0^{+1.2}_{-1.2}$	$z_{\text{drag}}$	1059.86	$1059.9^{+2.0}_{-2.0}$	$\chi_{\text{prior}}^2$	2.1	$7.6 (\nu: 6.8)$
$\Omega_{\Lambda}$	0.6943	$0.694^{+0.014}_{-0.015}$	$r_{\text{drag}}$	147.57	$147.56^{+0.84}_{-0.81}$	$\chi_{\text{CMB}}^2$	11270.4	$11285.2 (\nu: 16.2)$
$\Omega_{\text{m}}$	0.3057	$0.306^{+0.015}_{-0.014}$	$k_{\text{D}}$	0.14014	$0.1401^{+0.0011}_{-0.0012}$	$\chi_{\text{BAO}}^2$	4.37	$5.1 (\nu: 0.5)$
$\Omega_{\text{m}} h^2$	0.14132	$0.1413^{+0.0023}_{-0.0023}$	$100\theta_{\text{D}}$	0.16112	$0.1612^{+0.0014}_{-0.0014}$			

Best-fit  $\chi_{\text{eff}}^2 = 11984.04$ ;  $\bar{\chi}_{\text{eff}}^2 = 12005.15$ ;  $R - 1 = 0.04133$   
 $\chi_{\text{eff}}^2$ : BAO - 6DF: 0.00 MGS: 1.61 DR11CMass: 2.44 DR11LOWZ: 0.32 CMB - smica\_g30\_ftl\_full\_pp: 9.17 lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10494.54 plik\_dx11dr2\_HM\_v18\_TT: 766.64 Hubble - H070p6: 0.62 SN - JLA December\_2013: 706.61



### 23.7 base\_yhe\_plikHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00067}_{-0.00062}$	$\Omega_\Lambda$	$0.688^{+0.030}_{-0.032}$	$100\theta_*$	$1.0411^{+0.0010}_{-0.0010}$
$\Omega_c h^2$	$0.1194^{+0.0046}_{-0.0046}$	$\Omega_m$	$0.312^{+0.032}_{-0.030}$	$D_A/\text{Gpc}$	$13.890^{+0.090}_{-0.087}$
$100\theta_{\text{MC}}$	$1.0411^{+0.0019}_{-0.0018}$	$\Omega_m h^2$	$0.1423^{+0.0042}_{-0.0042}$	$z_{\text{drag}}$	$1060.0^{+2.6}_{-2.5}$
$\tau$	$0.082^{+0.039}_{-0.038}$	$\Omega_m h^3$	$0.0962^{+0.0016}_{-0.0016}$	$r_{\text{drag}}$	$147.30^{+0.97}_{-0.96}$
$Y_P$	$0.252^{+0.041}_{-0.041}$	$\sigma_8$	$0.833^{+0.033}_{-0.031}$	$k_D$	$0.1403^{+0.0015}_{-0.0015}$
$\ln(10^{10} A_s)$	$3.099^{+0.078}_{-0.076}$	$\sigma_8 \Omega_m^{0.5}$	$0.465^{+0.026}_{-0.025}$	$100\theta_D$	$0.1612^{+0.0015}_{-0.0015}$
$n_s$	$0.969^{+0.024}_{-0.023}$	$\sigma_8 \Omega_m^{0.25}$	$0.622^{+0.026}_{-0.025}$	$z_{\text{eq}}$	$3386^{+100}_{-100}$
$y_{\text{cal}}$	$1.0004^{+0.0049}_{-0.0049}$	$\sigma_8/h^{0.5}$	$1.013^{+0.038}_{-0.036}$	$k_{\text{eq}}$	$0.01033^{+0.00030}_{-0.00031}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	$2.498^{+0.088}_{-0.088}$	$100\theta_{\text{eq}}$	$0.816^{+0.020}_{-0.019}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$z_{\text{re}}$	$10.3^{+3.1}_{-3.6}$	$100\theta_{\text{s,eq}}$	$0.451^{+0.010}_{-0.0098}$
$A_{143}^{\text{tSZ}}$	$5.0^{+3.7}_{-3.8}$	$10^9 A_s$	$2.22^{+0.18}_{-0.17}$	$r_{\text{drag}}/D_V(0.57)$	$0.0716^{+0.0018}_{-0.0017}$
$A_{100}^{\text{PS}}$	$260^{+60}_{-60}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.031}_{-0.030}$	$H(0.57)$	$93.1^{+1.3}_{-1.2}$
$A_{143}^{\text{PS}}$	$45^{+20}_{-20}$	$D_{40}$	$1233^{+42}_{-40}$	$D_A(0.57)$	$1387^{+34}_{-34}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$D_{220}$	$5719^{+80}_{-78}$	$F_{\text{AP}}(0.57)$	$0.6760^{+0.0080}_{-0.0078}$
$A_{217}^{\text{PS}}$	$97^{+20}_{-20}$	$D_{810}$	$2535^{+28}_{-28}$	$f\sigma_8(0.57)$	$0.484^{+0.019}_{-0.018}$
$A^{\text{kSZ}}$	—	$D_{1420}$	$814^{+10}_{-10}$	$\sigma_8(0.57)$	$0.620^{+0.027}_{-0.025}$
$A_{100}^{\text{dustTT}}$	$7.5^{+3.7}_{-3.7}$	$D_{2000}$	$229.9^{+4.7}_{-4.8}$	$f_{2000}^{143}$	$31^{+7}_{-7}$
$A_{143}^{\text{dustTT}}$	$9.1^{+3.7}_{-3.6}$	$n_{\text{s},0.002}$	$0.969^{+0.024}_{-0.023}$	$f_{2000}^{143 \times 217}$	$33^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	$17.1^{+8.1}_{-8.3}$	$Y_P$	$0.252^{+0.041}_{-0.041}$	$f_{2000}^{217}$	$106.5^{+5.2}_{-5.2}$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	$Y_P^{\text{BBN}}$	$0.254^{+0.041}_{-0.041}$	$\chi_{\text{lowTEB}}^2$	$10497.3 (\nu: 3.8)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$\text{Age/Gyr}$	$13.79^{+0.12}_{-0.13}$	$\chi_{\text{plik}}^2$	$778.0 (\nu: 17.3)$
$c_{217}$	$0.9960^{+0.0028}_{-0.0029}$	$z_*$	$1090.2^{+1.3}_{-1.2}$	$\chi_{\text{prior}}^2$	$7.4 (\nu: 6.4)$
$H_0$	$67.6^{+2.5}_{-2.4}$	$r_*$	$144.61^{+0.96}_{-0.94}$	$\chi_{\text{CMB}}^2$	$11275.3 (\nu: 15.5)$

$$\bar{\chi}_{\text{eff}}^2 = 11282.69; R - 1 = 0.01267$$

### 23.8 base\_yhe\_plikHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022302	$0.02230^{+0.00044}_{-0.00044}$	$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.132^{+0.057}_{-0.057}$	$Y_P^{\text{BBN}}$	0.2504	$0.251^{+0.026}_{-0.027}$
$\Omega_c h^2$	0.11969	$0.1197^{+0.0029}_{-0.0029}$	$A_{100 \times 217}^{\text{dustTE}}$	0.306	$0.30^{+0.17}_{-0.17}$	Age/Gyr	13.803	$13.802^{+0.082}_{-0.082}$
$100\theta_{\text{MC}}$	1.04092	$1.0410^{+0.0012}_{-0.0012}$	$A_{143}^{\text{dustTE}}$	0.154	$0.15^{+0.11}_{-0.10}$	$z_*$	1090.13	$1090.18^{+0.87}_{-0.87}$
$\tau$	0.0828	$0.082^{+0.034}_{-0.035}$	$A_{143 \times 217}^{\text{dustTE}}$	0.338	$0.34^{+0.16}_{-0.16}$	$r_*$	144.55	$144.53^{+0.65}_{-0.64}$
$Y_P$	0.2491	$0.250^{+0.026}_{-0.027}$	$A_{217}^{\text{dustTE}}$	1.66	$1.67^{+0.50}_{-0.50}$	$100\theta_*$	1.04101	$1.04102^{+0.00067}_{-0.00066}$
$\ln(10^{10} A_s)$	3.101	$3.099^{+0.068}_{-0.069}$	$c_{100}$	0.99818	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	13.885	$13.884^{+0.062}_{-0.061}$
$n_s$	0.9668	$0.967^{+0.016}_{-0.016}$	$c_{217}$	0.99595	$0.9960^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	1059.89	$1059.9^{+1.7}_{-1.7}$
$y_{\text{cal}}$	1.00027	$1.0005^{+0.0049}_{-0.0048}$	$H_0$	67.40	$67.4^{+1.5}_{-1.5}$	$r_{\text{drag}}$	147.24	$147.22^{+0.67}_{-0.67}$
$A_{217}^{\text{CIB}}$	66.3	$64^{+10}_{-10}$	$\Omega_\Lambda$	0.6860	$0.686^{+0.019}_{-0.020}$	$k_D$	0.14051	$0.14048^{+0.00083}_{-0.00084}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.13	—	$\Omega_m$	0.3140	$0.314^{+0.020}_{-0.019}$	$100\theta_D$	0.16102	$0.16107^{+0.00096}_{-0.00095}$
$A_{143}^{\text{tSZ}}$	7.18	$5.3^{+3.6}_{-3.9}$	$\Omega_m h^2$	0.14264	$0.1427^{+0.0027}_{-0.0026}$	$z_{\text{eq}}$	3393	$3394^{+64}_{-63}$
$A_{100}^{\text{PS}}$	255	$262^{+50}_{-60}$	$\Omega_m h^3$	0.09615	$0.0962^{+0.0011}_{-0.0011}$	$k_{\text{eq}}$	0.010357	$0.01036^{+0.00020}_{-0.00019}$
$A_{143}^{\text{PS}}$	40.8	$44^{+20}_{-20}$	$\sigma_8$	0.8344	$0.834^{+0.029}_{-0.028}$	$100\theta_{\text{eq}}$	0.8147	$0.815^{+0.012}_{-0.012}$
$A_{143 \times 217}^{\text{PS}}$	36.9	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4675	$0.467^{+0.019}_{-0.019}$	$100\theta_{\text{s,eq}}$	0.4502	$0.4501^{+0.0063}_{-0.0063}$
$A_{217}^{\text{PS}}$	99.2	$98^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6245	$0.624^{+0.021}_{-0.022}$	$r_{\text{drag}}/D_V(0.57)$	0.07143	$0.0714^{+0.0011}_{-0.0011}$
$A^{\text{kSZ}}$	0.00	$< 8.14$	$\sigma_8/h^{0.5}$	1.0163	$1.015^{+0.033}_{-0.034}$	$H(0.57)$	92.95	$92.96^{+0.79}_{-0.76}$
$A_{100}^{\text{dustTT}}$	7.46	$7.5^{+3.7}_{-3.7}$	$\langle d^2 \rangle^{1/2}$	2.509	$2.507^{+0.075}_{-0.077}$	$D_A(0.57)$	1390.1	$1390^{+21}_{-21}$
$A_{143}^{\text{dustTT}}$	8.98	$9.0^{+3.6}_{-3.6}$	$z_{\text{re}}$	10.42	$10.3^{+3.1}_{-3.3}$	$F_{\text{AP}}(0.57)$	0.67665	$0.6767^{+0.0050}_{-0.0049}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.1^{+8.2}_{-8.2}$	$10^9 A_s$	2.222	$2.22^{+0.16}_{-0.15}$	$f\sigma_8(0.57)$	0.4857	$0.485^{+0.016}_{-0.016}$
$A_{217}^{\text{dustTT}}$	82.0	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	1.8831	$1.884^{+0.025}_{-0.025}$	$\sigma_8(0.57)$	0.6201	$0.620^{+0.023}_{-0.022}$
$A_{100}^{\text{dustEE}}$	0.0812	$0.081^{+0.011}_{-0.011}$	$D_{40}$	1237.8	$1239^{+31}_{-32}$	$f_{2000}^{143}$	29.5	$30^{+6}_{-6}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0488	$0.0488^{+0.0097}_{-0.0097}$	$D_{220}$	5726	$5728^{+76}_{-75}$	$f_{2000}^{143 \times 217}$	32.37	$33^{+4}_{-4}$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.099^{+0.064}_{-0.064}$	$D_{810}$	2535.9	$2536^{+27}_{-26}$	$f_{2000}^{217}$	105.94	$106.2^{+4.2}_{-4.1}$
$A_{143}^{\text{dustEE}}$	0.1002	$0.100^{+0.013}_{-0.014}$	$D_{1420}$	814.6	$814.3^{+9.5}_{-9.4}$	$\chi_{\text{lowTEB}}^2$	10496.98	$10497.6 (\nu: 2.7)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.223^{+0.092}_{-0.092}$	$D_{2000}$	230.27	$230.1^{+3.7}_{-3.6}$	$\chi_{\text{plik}}^2$	2431.5	$2451.3 (\nu: 24.4)$
$A_{217}^{\text{dustEE}}$	0.644	$0.65^{+0.26}_{-0.26}$	$n_{s,0.002}$	0.9668	$0.967^{+0.016}_{-0.016}$	$\chi_{\text{prior}}^2$	7.0	$19.4 (\nu: 15.2)$
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.074}_{-0.074}$	$Y_P$	0.2491	$0.250^{+0.026}_{-0.027}$	$\chi_{\text{CMB}}^2$	12928.5	$12949.0 (\nu: 23.2)$

Best-fit  $\chi_{\text{eff}}^2 = 12935.48$ ;  $\bar{\chi}_{\text{eff}}^2 = 12968.35$ ;  $R - 1 = 0.00815$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.98 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.52

### 23.9 base\_yhe\_plikHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022350	$0.02236^{+0.00037}_{-0.00038}$	$A_{143}^{\text{dust}TE}$	0.154	$0.15^{+0.11}_{-0.10}$	$100\theta_*$	1.04107	$1.04109^{+0.00060}_{-0.00060}$
$\Omega_c h^2$	0.11918	$0.1192^{+0.0021}_{-0.0021}$	$A_{143 \times 217}^{\text{dust}TE}$	0.338	$0.34^{+0.15}_{-0.15}$	$D_A/\text{Gpc}$	13.894	$13.890^{+0.055}_{-0.055}$
$100\theta_{\text{MC}}$	1.04098	$1.0411^{+0.0010}_{-0.0010}$	$A_{217}^{\text{dust}TE}$	1.66	$1.66^{+0.50}_{-0.50}$	$z_{\text{drag}}$	1059.93	$1060.1^{+1.6}_{-1.5}$
$\tau$	0.0871	$0.084^{+0.032}_{-0.033}$	$c_{100}$	0.99820	$0.9982^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.32	$147.29^{+0.62}_{-0.61}$
$Y_P$	0.2488	$0.252^{+0.025}_{-0.026}$	$c_{217}$	0.99588	$0.9960^{+0.0028}_{-0.0028}$	$k_D$	0.14047	$0.14039^{+0.00073}_{-0.00073}$
$\ln(10^{10} A_s)$	3.109	$3.104^{+0.065}_{-0.067}$	$H_0$	67.64	$67.7^{+1.1}_{-1.0}$	$100\theta_D$	0.16097	$0.16111^{+0.00095}_{-0.00094}$
$n_s$	0.9685	$0.969^{+0.014}_{-0.013}$	$\Omega_\Lambda$	0.6893	$0.689^{+0.013}_{-0.013}$	$z_{\text{eq}}$	3382.0	$3384^{+47}_{-47}$
$y_{\text{cal}}$	1.00016	$1.0005^{+0.0050}_{-0.0048}$	$\Omega_m$	0.3107	$0.311^{+0.013}_{-0.013}$	$k_{\text{eq}}$	0.010322	$0.01033^{+0.00014}_{-0.00014}$
$A_{217}^{\text{CIB}}$	64.7	$64^{+10}_{-10}$	$\Omega_m h^2$	0.14217	$0.1423^{+0.0020}_{-0.0020}$	$100\theta_{\text{eq}}$	0.8169	$0.8167^{+0.0088}_{-0.0088}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.33	—	$\Omega_m h^3$	0.09617	$0.0962^{+0.0011}_{-0.0011}$	$100\theta_{s,\text{eq}}$	0.45128	$0.4512^{+0.0045}_{-0.0045}$
$A_{143}^{\text{tSZ}}$	7.06	$5.3^{+3.7}_{-3.9}$	$\sigma_8$	0.8361	$0.835^{+0.029}_{-0.029}$	$r_{\text{drag}}/D_V(0.57)$	0.07161	$0.07161^{+0.00074}_{-0.00071}$
$A_{100}^{\text{PS}}$	252	$262^{+60}_{-50}$	$\sigma_8 \Omega_m^{0.5}$	0.4660	$0.465^{+0.018}_{-0.018}$	$H(0.57)$	93.05	$93.08^{+0.59}_{-0.58}$
$A_{143}^{\text{PS}}$	43.3	$44^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6242	$0.623^{+0.021}_{-0.021}$	$D_A(0.57)$	1386.9	$1387^{+15}_{-15}$
$A_{143 \times 217}^{\text{PS}}$	42.6	$40^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0165	$1.015^{+0.033}_{-0.034}$	$F_{\text{AP}}(0.57)$	0.67583	$0.6758^{+0.0033}_{-0.0034}$
$A_{217}^{\text{PS}}$	101.6	$98^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.509	$2.504^{+0.075}_{-0.076}$	$f\sigma_8(0.57)$	0.4859	$0.485^{+0.016}_{-0.016}$
$A^{\text{kSZ}}$	0.00	$< 8.09$	$z_{\text{re}}$	10.78	$10.5^{+2.9}_{-3.1}$	$\sigma_8(0.57)$	0.6221	$0.621^{+0.022}_{-0.022}$
$A_{100}^{\text{dust}TT}$	7.39	$7.5^{+3.7}_{-3.7}$	$10^9 A_s$	2.239	$2.23^{+0.15}_{-0.15}$	$f_{2000}^{143}$	28.9	$30^{+6}_{-6}$
$A_{143}^{\text{dust}TT}$	8.98	$9.0^{+3.7}_{-3.7}$	$10^9 A_s e^{-2\tau}$	1.8808	$1.883^{+0.025}_{-0.024}$	$f_{2000}^{143 \times 217}$	31.99	$33^{+4}_{-4}$
$A_{143 \times 217}^{\text{dust}TT}$	17.8	$17.1^{+8.2}_{-8.0}$	$D_{40}$	1235.9	$1236^{+29}_{-30}$	$f_{2000}^{217}$	105.46	$106.2^{+4.2}_{-4.1}$
$A_{217}^{\text{dust}TT}$	82.1	$82^{+10}_{-10}$	$D_{220}$	5726	$5730^{+75}_{-75}$	$\chi_{\text{lowTEB}}^2$	10497.21	$10497.5 (\nu: 2.9)$
$A_{100}^{\text{dust}EE}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{810}$	2535.7	$2536^{+27}_{-27}$	$\chi_{\text{plik}}^2$	2431.5	$2451.0 (\nu: 24.0)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0491	$0.0491^{+0.0094}_{-0.0099}$	$D_{1420}$	815.2	$814.5^{+9.6}_{-9.3}$	$\chi_{6\text{DF}}^2$	0.029	$0.059 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.100	$0.099^{+0.065}_{-0.064}$	$D_{2000}$	230.64	$230.1^{+3.7}_{-3.6}$	$\chi_{\text{MGS}}^2$	1.22	$1.28 (\nu: 0.1)$
$A_{143}^{\text{dust}EE}$	0.1004	$0.100^{+0.013}_{-0.014}$	$n_{s,0.002}$	0.9685	$0.969^{+0.014}_{-0.013}$	$\chi_{\text{DR11CMass}}^2$	2.50	$2.83 (\nu: 0.2)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.223^{+0.091}_{-0.091}$	$Y_P$	0.2488	$0.252^{+0.025}_{-0.026}$	$\chi_{\text{DR11LOWZ}}^2$	0.68	$0.78 (\nu: 0.1)$
$A_{217}^{\text{dust}EE}$	0.650	$0.65^{+0.25}_{-0.26}$	$Y_P^{\text{BBN}}$	0.2502	$0.253^{+0.025}_{-0.026}$	$\chi_{\text{prior}}^2$	6.8	$19.4 (\nu: 15.2)$
$A_{100}^{\text{dust}TE}$	0.142	$0.141^{+0.073}_{-0.074}$	Age/Gyr	13.794	$13.791^{+0.066}_{-0.066}$	$\chi_{\text{CMB}}^2$	12928.8	$12948.5 (\nu: 22.3)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.132^{+0.056}_{-0.056}$	$z_*$	1090.01	$1090.14^{+0.87}_{-0.85}$	$\chi_{\text{BAO}}^2$	4.42	$4.96 (\nu: 0.4)$
$A_{100 \times 217}^{\text{dust}TE}$	0.305	$0.30^{+0.16}_{-0.17}$	$r_*$	144.65	$144.61^{+0.56}_{-0.56}$			

Best-fit  $\chi_{\text{eff}}^2 = 12940.03$ ;  $\bar{\chi}_{\text{eff}}^2 = 12972.84$ ;  $R - 1 = 0.01208$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.03 MGS: 1.22 DR11CMass: 2.50 DR11LOWZ: 0.68 CMB - lowl.SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10497.21 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.55

### 23.10 base\_yhe\_plikHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022329	$0.02233^{+0.00043}_{-0.00044}$	$A_{100 \times 217}^{\text{dustTE}}$	0.307	$0.30^{+0.16}_{-0.17}$	$z_*$	1090.10	$1090.16^{+0.87}_{-0.87}$
$\Omega_c h^2$	0.11946	$0.1195^{+0.0029}_{-0.0028}$	$A_{143}^{\text{dustTE}}$	0.154	$0.15^{+0.11}_{-0.10}$	$r_*$	144.59	$144.57^{+0.65}_{-0.63}$
$100\theta_{\text{MC}}$	1.04095	$1.0410^{+0.0012}_{-0.0012}$	$A_{143 \times 217}^{\text{dustTE}}$	0.339	$0.34^{+0.15}_{-0.15}$	$100\theta_*$	1.04103	$1.04105^{+0.00066}_{-0.00066}$
$\tau$	0.0837	$0.083^{+0.034}_{-0.035}$	$A_{217}^{\text{dustTE}}$	1.67	$1.67^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	13.889	$13.887^{+0.061}_{-0.060}$
$Y_P$	0.2496	$0.251^{+0.026}_{-0.027}$	$c_{100}$	0.99819	$0.9982^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.93	$1060.0^{+1.7}_{-1.7}$
$\ln(10^{10} A_s)$	3.103	$3.102^{+0.068}_{-0.069}$	$c_{217}$	0.99603	$0.9960^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.27	$147.25^{+0.67}_{-0.66}$
$n_s$	0.9676	$0.968^{+0.016}_{-0.015}$	$H_0$	67.52	$67.5^{+1.5}_{-1.4}$	$k_D$	0.14048	$0.14044^{+0.00082}_{-0.00083}$
$y_{\text{cal}}$	1.00028	$1.0005^{+0.0049}_{-0.0048}$	$\Omega_\Lambda$	0.6875	$0.687^{+0.018}_{-0.019}$	$100\theta_D$	0.16102	$0.16109^{+0.00096}_{-0.00095}$
$A_{217}^{\text{CIB}}$	66.3	$64^{+10}_{-10}$	$\Omega_m$	0.3125	$0.313^{+0.019}_{-0.018}$	$z_{\text{eq}}$	3388	$3390^{+63}_{-61}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.14	—	$\Omega_m h^2$	0.14244	$0.1425^{+0.0026}_{-0.0025}$	$k_{\text{eq}}$	0.010342	$0.01035^{+0.00019}_{-0.00019}$
$A_{143}^{\text{tSZ}}$	7.16	$5.3^{+3.7}_{-3.9}$	$\Omega_m h^3$	0.09617	$0.0962^{+0.0011}_{-0.0011}$	$100\theta_{\text{eq}}$	0.8157	$0.816^{+0.012}_{-0.012}$
$A_{100}^{\text{PS}}$	255	$262^{+60}_{-50}$	$\sigma_8$	0.8343	$0.834^{+0.029}_{-0.028}$	$100\theta_{\text{s,eq}}$	0.4507	$0.4506^{+0.0062}_{-0.0062}$
$A_{143}^{\text{PS}}$	40.6	$44^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4664	$0.466^{+0.019}_{-0.019}$	$r_{\text{drag}}/D_V(0.57)$	0.07151	$0.0715^{+0.0010}_{-0.0010}$
$A_{143 \times 217}^{\text{PS}}$	36.9	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6238	$0.624^{+0.021}_{-0.022}$	$H(0.57)$	93.00	$93.02^{+0.78}_{-0.73}$
$A_{217}^{\text{PS}}$	99.0	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0154	$1.015^{+0.033}_{-0.034}$	$D_A(0.57)$	1388.6	$1388^{+20}_{-21}$
$A^{\text{kSZ}}$	0.00	$< 8.10$	$\langle d^2 \rangle^{1/2}$	2.507	$2.506^{+0.076}_{-0.077}$	$F_{\text{AP}}(0.57)$	0.67627	$0.6763^{+0.0048}_{-0.0047}$
$A_{100}^{\text{dustTT}}$	7.44	$7.5^{+3.7}_{-3.7}$	$z_{\text{re}}$	10.49	$10.4^{+3.1}_{-3.2}$	$f\sigma_8(0.57)$	0.4853	$0.485^{+0.016}_{-0.016}$
$A_{143}^{\text{dustTT}}$	9.01	$9.0^{+3.7}_{-3.7}$	$10^9 A_s$	2.225	$2.22^{+0.15}_{-0.15}$	$\sigma_8(0.57)$	0.6204	$0.620^{+0.023}_{-0.022}$
$A_{143 \times 217}^{\text{dustTT}}$	17.8	$17.1^{+8.2}_{-8.1}$	$10^9 A_s e^{-2\tau}$	1.8823	$1.883^{+0.025}_{-0.025}$	$f_{2000}^{143}$	29.3	$30^{+6}_{-6}$
$A_{217}^{\text{dustTT}}$	82.3	$82^{+10}_{-10}$	$D_{40}$	1236.6	$1237^{+31}_{-32}$	$f_{2000}^{143 \times 217}$	32.30	$33^{+4}_{-4}$
$A_{100}^{\text{dustEE}}$	0.0815	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5727	$5729^{+76}_{-76}$	$f_{2000}^{217}$	105.89	$106.2^{+4.2}_{-4.1}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0488	$0.0490^{+0.0095}_{-0.0098}$	$D_{810}$	2535.8	$2536^{+27}_{-26}$	$\chi_{\text{lowTEB}}^2$	10496.93	$10497.6 (\nu: 2.9)$
$A_{100 \times 217}^{\text{dustEE}}$	0.098	$0.099^{+0.065}_{-0.064}$	$D_{1420}$	814.7	$814.4^{+9.5}_{-9.3}$	$\chi_{\text{plik}}^2$	2431.5	$2451.3 (\nu: 24.3)$
$A_{143}^{\text{dustEE}}$	0.1004	$0.100^{+0.013}_{-0.014}$	$D_{2000}$	230.32	$230.1^{+3.7}_{-3.6}$	$\chi_{\text{JLA}}^2$	706.78	$706.85 (\nu: 0.0)$
$A_{143 \times 217}^{\text{dustEE}}$	0.221	$0.223^{+0.092}_{-0.092}$	$n_{\text{s},0.002}$	0.9676	$0.968^{+0.016}_{-0.015}$	$\chi_{\text{prior}}^2$	7.1	$19.4 (\nu: 15.2)$
$A_{217}^{\text{dustEE}}$	0.652	$0.65^{+0.25}_{-0.26}$	$Y_P$	0.2496	$0.251^{+0.026}_{-0.027}$	$\chi_{\text{CMB}}^2$	12928.4	$12948.9 (\nu: 22.9)$
$A_{100}^{\text{dustTE}}$	0.141	$0.141^{+0.073}_{-0.074}$	$Y_P^{\text{BBN}}$	0.2509	$0.252^{+0.026}_{-0.027}$			
$A_{100 \times 143}^{\text{dustTE}}$	0.132	$0.132^{+0.056}_{-0.056}$	Age/Gyr	13.799	$13.797^{+0.080}_{-0.081}$			

Best-fit  $\chi_{\text{eff}}^2 = 13642.28$ ;  $\bar{\chi}_{\text{eff}}^2 = 13675.08$ ;  $R - 1 = 0.01066$

$\chi_{\text{eff}}^2$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.93 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.48 SN - JLA December\_2013: 706.78

### 23.11 base\_yhe\_plikHM\_TTTEEE\_lowTEB\_post\_lensing

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022271	$0.02228^{+0.00045}_{-0.00044}$	$A_{100 \times 217}^{\text{dustTE}}$	0.306	$0.30^{+0.16}_{-0.16}$	$z_*$	1090.01	$1090.04^{+0.86}_{-0.84}$
$\Omega_c h^2$	0.11924	$0.1192^{+0.0028}_{-0.0029}$	$A_{143}^{\text{dustTE}}$	0.154	$0.16^{+0.11}_{-0.10}$	$r_*$	144.70	$144.70^{+0.63}_{-0.61}$
$100\theta_{\text{MC}}$	1.04087	$1.0409^{+0.0011}_{-0.0012}$	$A_{143 \times 217}^{\text{dustTE}}$	0.340	$0.34^{+0.16}_{-0.16}$	$100\theta_*$	1.04105	$1.04108^{+0.00064}_{-0.00065}$
$\tau$	0.0629	$0.063^{+0.028}_{-0.028}$	$A_{217}^{\text{dustTE}}$	1.67	$1.66^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	13.899	$13.899^{+0.060}_{-0.058}$
$Y_P$	0.2460	$0.247^{+0.026}_{-0.027}$	$c_{100}$	0.99818	$0.9982^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1059.67	$1059.7^{+1.7}_{-1.6}$
$\ln(10^{10} A_s)$	3.058	$3.060^{+0.053}_{-0.052}$	$c_{217}$	0.99604	$0.9960^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.40	$147.40^{+0.65}_{-0.62}$
$n_s$	0.9659	$0.966^{+0.016}_{-0.015}$	$H_0$	67.52	$67.6^{+1.5}_{-1.5}$	$k_D$	0.14044	$0.14041^{+0.00084}_{-0.00080}$
$y_{\text{cal}}$	0.99999	$1.0001^{+0.0048}_{-0.0046}$	$\Omega_\Lambda$	0.6882	$0.688^{+0.019}_{-0.019}$	$100\theta_D$	0.16094	$0.16098^{+0.00094}_{-0.0010}$
$A_{217}^{\text{CIB}}$	67.8	$65^{+10}_{-10}$	$\Omega_m$	0.3118	$0.312^{+0.019}_{-0.019}$	$z_{\text{eq}}$	3382	$3381^{+61}_{-63}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\Omega_m h^2$	0.14216	$0.1421^{+0.0026}_{-0.0026}$	$k_{\text{eq}}$	0.010321	$0.01032^{+0.00019}_{-0.00019}$
$A_{143}^{\text{tSZ}}$	7.34	$5.2^{+3.8}_{-3.9}$	$\Omega_m h^3$	0.09599	$0.0960^{+0.0011}_{-0.0011}$	$100\theta_{\text{eq}}$	0.8167	$0.817^{+0.012}_{-0.012}$
$A_{100}^{\text{PS}}$	259	$264^{+50}_{-50}$	$\sigma_8$	0.8150	$0.816^{+0.020}_{-0.019}$	$100\theta_{\text{s,eq}}$	0.4512	$0.4513^{+0.0063}_{-0.0061}$
$A_{143}^{\text{PS}}$	39.1	$44^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4551	$0.455^{+0.014}_{-0.013}$	$r_{\text{drag}}/D_V(0.57)$	0.07156	$0.0716^{+0.0011}_{-0.0010}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6090	$0.609^{+0.014}_{-0.014}$	$H(0.57)$	92.96	$92.98^{+0.79}_{-0.75}$
$A_{217}^{\text{PS}}$	96.9	$97^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9919	$0.992^{+0.021}_{-0.021}$	$D_A(0.57)$	1388.8	$1388^{+21}_{-21}$
$A^{\text{kSZ}}$	0.0	—	$\langle d^2 \rangle^{1/2}$	2.4539	$2.455^{+0.049}_{-0.050}$	$F_{\text{AP}}(0.57)$	0.67611	$0.6760^{+0.0049}_{-0.0047}$
$A_{100}^{\text{dustTT}}$	7.46	$7.6^{+3.8}_{-3.9}$	$z_{\text{re}}$	8.55	$8.5^{+2.8}_{-2.7}$	$f\sigma_8(0.57)$	0.4740	$0.474^{+0.010}_{-0.010}$
$A_{143}^{\text{dustTT}}$	9.09	$9.1^{+3.6}_{-3.5}$	$10^9 A_s$	2.129	$2.13^{+0.11}_{-0.11}$	$\sigma_8(0.57)$	0.6062	$0.607^{+0.017}_{-0.017}$
$A_{143 \times 217}^{\text{dustTT}}$	17.7	$17.3^{+8.3}_{-8.0}$	$10^9 A_s e^{-2\tau}$	1.8779	$1.879^{+0.024}_{-0.025}$	$f_{2000}^{143}$	30.1	$30^{+6}_{-6}$
$A_{217}^{\text{dustTT}}$	81.9	$82^{+10}_{-10}$	$D_{40}$	1229.8	$1230^{+30}_{-31}$	$f_{2000}^{143 \times 217}$	32.73	$33^{+4}_{-4}$
$A_{100}^{\text{dustEE}}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5723	$5725^{+74}_{-75}$	$f_{2000}^{217}$	106.22	$106.3^{+4.2}_{-4.0}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0490	$0.0492^{+0.0097}_{-0.0099}$	$D_{810}$	2533.7	$2534^{+26}_{-27}$	$\chi_{\text{lensing}}^2$	9.77	$10.4 (\nu: 1.8)$
$A_{100 \times 217}^{\text{dustEE}}$	0.100	$0.099^{+0.065}_{-0.064}$	$D_{1420}$	814.6	$814.5^{+9.8}_{-9.3}$	$\chi_{\text{lowTEB}}^2$	10495.28	$10495.8 (\nu: 1.2)$
$A_{143}^{\text{dustEE}}$	0.1005	$0.100^{+0.013}_{-0.014}$	$D_{2000}$	229.96	$229.9^{+3.8}_{-3.5}$	$\chi_{\text{plik}}^2$	2435.0	$2454.4 (\nu: 23.7)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.225^{+0.093}_{-0.092}$	$n_{\text{s},0.002}$	0.9659	$0.966^{+0.016}_{-0.015}$	$\chi_{\text{prior}}^2$	7.1	$19.6 (\nu: 15.7)$
$A_{217}^{\text{dustEE}}$	0.650	$0.66^{+0.25}_{-0.27}$	$Y_P$	0.2460	$0.247^{+0.026}_{-0.027}$	$\chi_{\text{CMB}}^2$	12940.1	$12960.7 (\nu: 22.8)$
$A_{100}^{\text{dustTE}}$	0.141	$0.142^{+0.077}_{-0.073}$	$Y_P^{\text{BBN}}$	0.2473	$0.248^{+0.026}_{-0.027}$			
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.132^{+0.059}_{-0.057}$	Age/Gyr	13.806	$13.803^{+0.081}_{-0.082}$			

Best-fit  $\chi_{\text{eff}}^2 = 12947.17$ ;  $\bar{\chi}_{\text{eff}}^2 = 12980.28$ ;  $R - 1 = 0.03526$

$\chi_{\text{eff}}^2$ : CMB - smica\_g30\_ftl\_full\_pp: 9.77 lowl\_SMW\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 10495.28 plik\_dx11dr2\_HM\_v18.TTTEEE: 2435.02

### 23.12 base\_yhe\_plikHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022358	$0.02234^{+0.00043}_{-0.00044}$	$A_{100 \times 217}^{\text{dustTE}}$	0.302	$0.30^{+0.16}_{-0.17}$	$z_*$	1090.13	$1090.16^{+0.88}_{-0.86}$
$\Omega_c h^2$	0.11943	$0.1194^{+0.0029}_{-0.0028}$	$A_{143}^{\text{dustTE}}$	0.153	$0.15^{+0.11}_{-0.10}$	$r_*$	144.57	$144.57^{+0.65}_{-0.64}$
$100\theta_{\text{MC}}$	1.04105	$1.0410^{+0.0012}_{-0.0012}$	$A_{143 \times 217}^{\text{dustTE}}$	0.338	$0.34^{+0.15}_{-0.15}$	$100\theta_*$	1.04108	$1.04107^{+0.00066}_{-0.00066}$
$\tau$	0.0835	$0.083^{+0.034}_{-0.035}$	$A_{217}^{\text{dustTE}}$	1.68	$1.67^{+0.50}_{-0.50}$	$D_A/\text{Gpc}$	13.886	$13.887^{+0.061}_{-0.061}$
$Y_{\text{P}}$	0.2513	$0.252^{+0.026}_{-0.027}$	$c_{100}$	0.99817	$0.9982^{+0.0015}_{-0.0015}$	$z_{\text{drag}}$	1060.05	$1060.0^{+1.7}_{-1.7}$
$\ln(10^{10} A_s)$	3.102	$3.103^{+0.068}_{-0.070}$	$c_{217}$	0.99602	$0.9960^{+0.0028}_{-0.0028}$	$r_{\text{drag}}$	147.24	$147.25^{+0.67}_{-0.66}$
$n_s$	0.9682	$0.968^{+0.016}_{-0.015}$	$H_0$	67.59	$67.6^{+1.5}_{-1.5}$	$k_D$	0.14046	$0.14042^{+0.00083}_{-0.00083}$
$y_{\text{cal}}$	1.00030	$1.0005^{+0.0049}_{-0.0048}$	$\Omega_\Lambda$	0.6882	$0.688^{+0.018}_{-0.019}$	$100\theta_D$	0.16107	$0.16110^{+0.00096}_{-0.00095}$
$A_{217}^{\text{CIB}}$	67.6	$64^{+10}_{-10}$	$\Omega_m$	0.3118	$0.312^{+0.019}_{-0.018}$	$z_{\text{eq}}$	3388	$3388^{+64}_{-62}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.04	—	$\Omega_m h^2$	0.14243	$0.1424^{+0.0027}_{-0.0026}$	$k_{\text{eq}}$	0.010341	$0.01034^{+0.00020}_{-0.00019}$
$A_{143}^{\text{tSZ}}$	7.23	$5.3^{+3.7}_{-3.9}$	$\Omega_m h^3$	0.09626	$0.0962^{+0.0011}_{-0.0011}$	$100\theta_{\text{eq}}$	0.8159	$0.816^{+0.012}_{-0.012}$
$A_{100}^{\text{PS}}$	258	$262^{+60}_{-50}$	$\sigma_8$	0.8342	$0.835^{+0.029}_{-0.029}$	$100\theta_{\text{s,eq}}$	0.4507	$0.4507^{+0.0062}_{-0.0063}$
$A_{143}^{\text{PS}}$	39.5	$44^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	0.4659	$0.466^{+0.019}_{-0.019}$	$r_{\text{drag}}/D_V(0.57)$	0.07155	$0.0715^{+0.0010}_{-0.0010}$
$A_{143 \times 217}^{\text{PS}}$	34	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	0.6234	$0.624^{+0.021}_{-0.022}$	$H(0.57)$	93.05	$93.04^{+0.79}_{-0.74}$
$A_{217}^{\text{PS}}$	97.4	$98^{+20}_{-20}$	$\sigma_8/h^{0.5}$	1.0148	$1.015^{+0.033}_{-0.034}$	$D_A(0.57)$	1387.5	$1388^{+21}_{-21}$
$A^{\text{kSZ}}$	0.00	$< 8.11$	$\langle d^2 \rangle^{1/2}$	2.504	$2.505^{+0.076}_{-0.077}$	$F_{\text{AP}}(0.57)$	0.67611	$0.6762^{+0.0049}_{-0.0047}$
$A_{100}^{\text{dustTT}}$	7.40	$7.5^{+3.7}_{-3.7}$	$z_{\text{re}}$	10.47	$10.4^{+3.1}_{-3.2}$	$f\sigma_8(0.57)$	0.4851	$0.485^{+0.016}_{-0.016}$
$A_{143}^{\text{dustTT}}$	9.05	$9.0^{+3.7}_{-3.7}$	$10^9 A_s$	2.225	$2.23^{+0.16}_{-0.15}$	$\sigma_8(0.57)$	0.6205	$0.621^{+0.023}_{-0.023}$
$A_{143 \times 217}^{\text{dustTT}}$	17.4	$17.1^{+8.2}_{-8.1}$	$10^9 A_s e^{-2\tau}$	1.8827	$1.884^{+0.025}_{-0.025}$	$f_{2000}^{143}$	29.8	$30^{+6}_{-6}$
$A_{217}^{\text{dustTT}}$	81.5	$82^{+10}_{-10}$	$D_{40}$	1235.5	$1237^{+31}_{-32}$	$f_{2000}^{143 \times 217}$	32.60	$33^{+4}_{-4}$
$A_{100}^{\text{dustEE}}$	0.0813	$0.081^{+0.011}_{-0.011}$	$D_{220}$	5728	$5729^{+76}_{-76}$	$f_{2000}^{217}$	106.15	$106.3^{+4.2}_{-4.1}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0489	$0.0490^{+0.0095}_{-0.0098}$	$D_{810}$	2535.7	$2536^{+27}_{-26}$	$\chi_{\text{lowTEB}}^2$	10496.76	$10497.6 (\nu: 2.9)$
$A_{100 \times 217}^{\text{dustEE}}$	0.099	$0.099^{+0.065}_{-0.064}$	$D_{1420}$	814.4	$814.4^{+9.5}_{-9.3}$	$\chi_{\text{plik}}^2$	2431.7	$2451.3 (\nu: 24.5)$
$A_{143}^{\text{dustEE}}$	0.1002	$0.100^{+0.013}_{-0.014}$	$D_{2000}$	230.15	$230.1^{+3.7}_{-3.6}$	$\chi_{\text{H070p6}}^2$	0.82	$0.88 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.223^{+0.092}_{-0.091}$	$n_{\text{s},0.002}$	0.9682	$0.968^{+0.016}_{-0.015}$	$\chi_{\text{prior}}^2$	7.1	$19.4 (\nu: 15.2)$
$A_{217}^{\text{dustEE}}$	0.645	$0.65^{+0.25}_{-0.26}$	$Y_{\text{P}}$	0.2513	$0.252^{+0.026}_{-0.027}$	$\chi_{\text{CMB}}^2$	12928.5	$12948.9 (\nu: 23.0)$
$A_{100}^{\text{dustTE}}$	0.140	$0.141^{+0.073}_{-0.074}$	$Y_{\text{P}}^{\text{BBN}}$	0.2526	$0.253^{+0.026}_{-0.027}$			
$A_{100 \times 143}^{\text{dustTE}}$	0.131	$0.132^{+0.056}_{-0.056}$	Age/Gyr	13.793	$13.794^{+0.080}_{-0.081}$			

Best-fit  $\chi_{\text{eff}}^2 = 12936.39$ ;  $\bar{\chi}_{\text{eff}}^2 = 12969.14$ ;  $R - 1 = 0.01089$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10496.76 plik\_dx11dr2\_HM\_v18\_TTTEEE: 2431.70 Hubble - H070p6: 0.82

### 23.13 base\_yhe\_plikHM\_TTTEE\_lowTEB\_post\_lensing\_BAO\_H070p6\_JLA

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022340	$0.02234^{+0.00038}_{-0.00038}$	$A_{143 \times 217}^{\text{dust}TE}$	0.335	$0.34^{+0.16}_{-0.16}$	$z_{\text{drag}}$	1059.89	$1059.9^{+1.5}_{-1.5}$
$\Omega_c h^2$	0.11875	$0.1188^{+0.0020}_{-0.0021}$	$A_{217}^{\text{dust}TE}$	1.655	$1.66^{+0.49}_{-0.50}$	$r_{\text{drag}}$	147.45	$147.44^{+0.61}_{-0.58}$
$100\theta_{\text{MC}}$	1.04106	$1.0411^{+0.0010}_{-0.0010}$	$c_{100}$	0.99816	$0.9982^{+0.0014}_{-0.0015}$	$k_{\text{D}}$	0.14031	$0.14031^{+0.00075}_{-0.00071}$
$\tau$	0.0669	$0.067^{+0.025}_{-0.023}$	$c_{217}$	0.99607	$0.9960^{+0.0028}_{-0.0028}$	$100\theta_{\text{D}}$	0.16103	$0.16104^{+0.00095}_{-0.00094}$
$Y_{\text{P}}$	0.2492	$0.249^{+0.025}_{-0.026}$	$H_0$	67.82	$67.8^{+1.1}_{-1.0}$	$z_{\text{eq}}$	3371.5	$3372^{+45}_{-46}$
$\ln(10^{10} A_{\text{s}})$	3.0663	$3.066^{+0.047}_{-0.046}$	$\Omega_{\Lambda}$	0.6918	$0.692^{+0.013}_{-0.013}$	$k_{\text{eq}}$	0.010290	$0.01029^{+0.00014}_{-0.00014}$
$n_{\text{s}}$	0.9686	$0.968^{+0.013}_{-0.013}$	$\Omega_{\text{m}}$	0.3082	$0.308^{+0.013}_{-0.013}$	$100\theta_{\text{eq}}$	0.8188	$0.8188^{+0.0090}_{-0.0084}$
$y_{\text{cal}}$	1.00007	$1.0001^{+0.0049}_{-0.0049}$	$\Omega_{\text{m}} h^2$	0.14173	$0.1418^{+0.0019}_{-0.0019}$	$100\theta_{\text{s,eq}}$	0.45230	$0.4523^{+0.0045}_{-0.0043}$
$A_{217}^{\text{CIB}}$	68.1	$65^{+10}_{-10}$	$\Omega_{\text{m}} h^3$	0.09612	$0.0961^{+0.0010}_{-0.0010}$	$r_{\text{drag}}/D_{\text{V}}(0.57)$	0.07176	$0.07176^{+0.00073}_{-0.00068}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$\sigma_8$	0.8173	$0.817^{+0.019}_{-0.019}$	$H(0.57)$	93.11	$93.11^{+0.59}_{-0.58}$
$A_{143}^{\text{tSZ}}$	7.32	$5.2^{+3.8}_{-4.0}$	$\sigma_8 \Omega_{\text{m}}^{0.5}$	0.4537	$0.454^{+0.012}_{-0.012}$	$D_{\text{A}}(0.57)$	1384.7	$1385^{+15}_{-15}$
$A_{100}^{\text{PS}}$	258	$264^{+50}_{-50}$	$\sigma_8 \Omega_{\text{m}}^{0.25}$	0.6090	$0.609^{+0.013}_{-0.013}$	$F_{\text{AP}}(0.57)$	0.67519	$0.6752^{+0.0032}_{-0.0033}$
$A_{143}^{\text{PS}}$	39.1	$44^{+20}_{-20}$	$\sigma_8/h^{0.5}$	0.9925	$0.992^{+0.021}_{-0.021}$	$f\sigma_8(0.57)$	0.4743	$0.474^{+0.010}_{-0.010}$
$A_{143 \times 217}^{\text{PS}}$	33	$39^{+20}_{-20}$	$\langle d^2 \rangle^{1/2}$	2.4521	$2.452^{+0.049}_{-0.050}$	$\sigma_8(0.57)$	0.6088	$0.609^{+0.016}_{-0.015}$
$A_{217}^{\text{PS}}$	96.5	$96^{+20}_{-20}$	$z_{\text{re}}$	8.93	$8.9^{+2.2}_{-2.3}$	$f_{2000}^{143}$	30.1	$31^{+6}_{-6}$
$A^{\text{kSZ}}$	0.0	—	$10^9 A_{\text{s}}$	2.146	$2.15^{+0.10}_{-0.097}$	$f_{2000}^{143 \times 217}$	32.78	$33^{+4}_{-4}$
$A_{100}^{\text{dust}TT}$	7.49	$7.6^{+3.9}_{-3.9}$	$10^9 A_{\text{s}} e^{-2\tau}$	1.8774	$1.878^{+0.023}_{-0.024}$	$f_{2000}^{217}$	106.26	$106.4^{+4.3}_{-4.1}$
$A_{143}^{\text{dust}TT}$	9.10	$9.1^{+3.7}_{-3.4}$	$D_{40}$	1225.8	$1227^{+27}_{-30}$	$\chi_{\text{lensing}}^2$	9.74	$10.4 (\nu: 1.7)$
$A_{143 \times 217}^{\text{dust}TT}$	17.7	$17.3^{+8.2}_{-8.0}$	$D_{220}$	5724	$5726^{+72}_{-77}$	$\chi_{\text{lowTEB}}^2$	10494.92	$10495.4 (\nu: 0.9)$
$A_{217}^{\text{dust}TT}$	81.7	$82^{+10}_{-10}$	$D_{810}$	2534.1	$2534^{+26}_{-27}$	$\chi_{\text{plik}}^2$	2435.4	$2454.4 (\nu: 23.4)$
$A_{100}^{\text{dust}EE}$	0.0816	$0.082^{+0.011}_{-0.011}$	$D_{1420}$	814.8	$814.5^{+9.9}_{-9.6}$	$\chi_{\text{H070p6}}^2$	0.70	$0.73 (\nu: 0.0)$
$A_{100 \times 143}^{\text{dust}EE}$	0.0492	$0.0494^{+0.0096}_{-0.0099}$	$D_{2000}$	229.96	$229.8^{+3.8}_{-3.6}$	$\chi_{\text{JLA}}^2$	706.661	$706.70 (\nu: 0.0)$
$A_{100 \times 217}^{\text{dust}EE}$	0.0998	$0.099^{+0.064}_{-0.063}$	$n_{\text{s},0.002}$	0.9686	$0.968^{+0.013}_{-0.013}$	$\chi_{6\text{DF}}^2$	0.010	$0.040 (\nu: 0.0)$
$A_{143}^{\text{dust}EE}$	0.1008	$0.100^{+0.013}_{-0.014}$	$Y_{\text{P}}$	0.2492	$0.249^{+0.025}_{-0.026}$	$\chi_{\text{MGS}}^2$	1.41	$1.46 (\nu: 0.1)$
$A_{143 \times 217}^{\text{dust}EE}$	0.223	$0.225^{+0.091}_{-0.090}$	$Y_{\text{P}}^{\text{BBN}}$	0.2506	$0.251^{+0.025}_{-0.026}$	$\chi_{\text{DR11CMass}}^2$	2.41	$2.74 (\nu: 0.1)$
$A_{217}^{\text{dust}EE}$	0.652	$0.66^{+0.25}_{-0.27}$	Age/Gyr	13.791	$13.791^{+0.066}_{-0.067}$	$\chi_{\text{DR11LOWZ}}^2$	0.48	$0.59 (\nu: 0.1)$
$A_{100}^{\text{dust}TE}$	0.141	$0.142^{+0.077}_{-0.078}$	$z_*$	1090.00	$1090.02^{+0.85}_{-0.84}$	$\chi_{\text{prior}}^2$	7.3	$19.7 (\nu: 15.6)$
$A_{100 \times 143}^{\text{dust}TE}$	0.132	$0.133^{+0.059}_{-0.058}$	$r_*$	144.76	$144.76^{+0.55}_{-0.53}$	$\chi_{\text{CMB}}^2$	12940.0	$12960.2 (\nu: 22.1)$
$A_{100 \times 217}^{\text{dust}TE}$	0.304	$0.30^{+0.16}_{-0.17}$	$100\theta_*$	1.04114	$1.04115^{+0.00057}_{-0.00059}$	$\chi_{\text{BAO}}^2$	4.31	$4.83 (\nu: 0.2)$
$A_{143}^{\text{dust}TE}$	0.152	$0.16^{+0.11}_{-0.10}$	$D_{\text{A}}/\text{Gpc}$	13.904	$13.904^{+0.054}_{-0.053}$			

Best-fit  $\chi_{\text{eff}}^2 = 13658.97$ ;  $\bar{\chi}_{\text{eff}}^2 = 13692.15$ ;  $R - 1 = 0.04496$

$\chi_{\text{eff}}^2$ : BAO - 6DF: 0.01 MGS: 1.41 DR11CMass: 2.41 DR11LOWZ: 0.48 CMB - smica\_g30\_ftl\_full\_pp: 9.74 lowl\_SMW\_70\_dx11d.2014.10.03\_v5c\_Ap: 10494.92 plik\_dx11dr2\_HM\_v18\_TTT

## 23.14 base\_yhe\_plikHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02231^{+0.00044}_{-0.00044}$	$A_{100 \times 143}^{\text{dust}TE}$	$0.132^{+0.056}_{-0.057}$	$Y_P^{\text{BBN}}$	$0.252^{+0.026}_{-0.027}$
$\Omega_c h^2$	$0.1197^{+0.0029}_{-0.0029}$	$A_{100 \times 217}^{\text{dust}TE}$	$0.30^{+0.16}_{-0.17}$	Age/Gyr	$13.801^{+0.081}_{-0.082}$
$100\theta_{\text{MC}}$	$1.0410^{+0.0012}_{-0.0012}$	$A_{143}^{\text{dust}TE}$	$0.15^{+0.11}_{-0.10}$	$z_*$	$1090.18^{+0.87}_{-0.87}$
$\tau$	$0.082^{+0.033}_{-0.034}$	$A_{143 \times 217}^{\text{dust}TE}$	$0.34^{+0.15}_{-0.15}$	$r_*$	$144.54^{+0.65}_{-0.64}$
$Y_P$	$0.250^{+0.026}_{-0.027}$	$A_{217}^{\text{dust}TE}$	$1.67^{+0.50}_{-0.50}$	$100\theta_*$	$1.04103^{+0.00067}_{-0.00066}$
$\ln(10^{10} A_s)$	$3.100^{+0.068}_{-0.068}$	$c_{100}$	$0.9982^{+0.0015}_{-0.0015}$	$D_A/\text{Gpc}$	$13.884^{+0.062}_{-0.061}$
$n_s$	$0.967^{+0.016}_{-0.016}$	$c_{217}$	$0.9960^{+0.0028}_{-0.0028}$	$z_{\text{drag}}$	$1059.9^{+1.7}_{-1.7}$
$y_{\text{cal}}$	$1.0005^{+0.0049}_{-0.0048}$	$H_0$	$67.4^{+1.5}_{-1.5}$	$r_{\text{drag}}$	$147.22^{+0.67}_{-0.67}$
$A_{217}^{\text{CIB}}$	$64^{+10}_{-10}$	$\Omega_\Lambda$	$0.686^{+0.019}_{-0.020}$	$k_D$	$0.14048^{+0.00083}_{-0.00084}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$\Omega_m$	$0.314^{+0.020}_{-0.019}$	$100\theta_D$	$0.16108^{+0.00096}_{-0.00095}$
$A_{143}^{\text{tSZ}}$	$5.3^{+3.6}_{-3.9}$	$\Omega_m h^2$	$0.1427^{+0.0027}_{-0.0026}$	$z_{\text{eq}}$	$3394^{+64}_{-63}$
$A_{100}^{\text{PS}}$	$262^{+60}_{-50}$	$\Omega_m h^3$	$0.0962^{+0.0011}_{-0.0011}$	$k_{\text{eq}}$	$0.01036^{+0.00020}_{-0.00019}$
$A_{143}^{\text{PS}}$	$44^{+20}_{-20}$	$\sigma_8$	$0.834^{+0.028}_{-0.028}$	$100\theta_{\text{eq}}$	$0.815^{+0.012}_{-0.012}$
$A_{143 \times 217}^{\text{PS}}$	$40^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.5}$	$0.467^{+0.019}_{-0.019}$	$100\theta_{\text{s,eq}}$	$0.4502^{+0.0063}_{-0.0063}$
$A_{217}^{\text{PS}}$	$98^{+20}_{-20}$	$\sigma_8 \Omega_m^{0.25}$	$0.624^{+0.021}_{-0.021}$	$r_{\text{drag}}/D_V(0.57)$	$0.0714^{+0.0011}_{-0.0010}$
$A^{\text{kSZ}}$	$< 8.09$	$\sigma_8/h^{0.5}$	$1.016^{+0.033}_{-0.032}$	$H(0.57)$	$92.97^{+0.79}_{-0.75}$
$A_{100}^{\text{dust}TT}$	$7.5^{+3.7}_{-3.7}$	$\langle d^2 \rangle^{1/2}$	$2.508^{+0.075}_{-0.074}$	$D_A(0.57)$	$1390^{+21}_{-21}$
$A_{143}^{\text{dust}TT}$	$9.0^{+3.7}_{-3.7}$	$z_{\text{re}}$	$10.3^{+2.9}_{-3.1}$	$F_{\text{AP}}(0.57)$	$0.6766^{+0.0049}_{-0.0048}$
$A_{143 \times 217}^{\text{dust}TT}$	$17.1^{+8.2}_{-8.1}$	$10^9 A_s$	$2.22^{+0.15}_{-0.15}$	$f\sigma_8(0.57)$	$0.486^{+0.016}_{-0.016}$
$A_{217}^{\text{dust}TT}$	$82^{+10}_{-10}$	$10^9 A_s e^{-2\tau}$	$1.884^{+0.025}_{-0.025}$	$\sigma_8(0.57)$	$0.620^{+0.022}_{-0.022}$
$A_{100}^{\text{dust}EE}$	$0.081^{+0.011}_{-0.011}$	$D_{40}$	$1239^{+32}_{-32}$	$f_{2000}^{143}$	$30^{+6}_{-6}$
$A_{100 \times 143}^{\text{dust}EE}$	$0.0489^{+0.0095}_{-0.0098}$	$D_{220}$	$5728^{+76}_{-76}$	$f_{2000}^{143 \times 217}$	$33^{+4}_{-4}$
$A_{100 \times 217}^{\text{dust}EE}$	$0.0995^{+0.064}_{-0.064}$	$D_{810}$	$2536^{+27}_{-26}$	$f_{2000}^{217}$	$106.2^{+4.2}_{-4.1}$
$A_{143}^{\text{dust}EE}$	$0.100^{+0.013}_{-0.014}$	$D_{1420}$	$814.3^{+9.6}_{-9.3}$	$\chi_{\text{lowTEB}}^2$	$10497.6 (\nu: 2.8)$
$A_{143 \times 217}^{\text{dust}EE}$	$0.223^{+0.092}_{-0.092}$	$D_{2000}$	$230.1^{+3.6}_{-3.6}$	$\chi_{\text{plik}}^2$	$2451.2 (\nu: 24.2)$
$A_{217}^{\text{dust}EE}$	$0.65^{+0.25}_{-0.26}$	$n_{\text{s},0.002}$	$0.967^{+0.016}_{-0.016}$	$\chi_{\text{prior}}^2$	$19.3 (\nu: 15.2)$
$A_{100}^{\text{dust}TE}$	$0.141^{+0.073}_{-0.074}$	$Y_P$	$0.250^{+0.026}_{-0.027}$	$\chi_{\text{CMB}}^2$	$12948.9 (\nu: 23.0)$

$$\bar{\chi}_{\text{eff}}^2 = 12968.22; R - 1 = 0.01017$$



### 23.15 base\_yhe\_CamSpecHM\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02232	$0.02230^{+0.00067}_{-0.00065}$ $(-0.0\sigma)$	$\beta_1^1$	0.03	$-0.1^{+2.0}_{-1.9}$	$r_*$	144.62	$144.66^{+0.94}_{-0.94}$ $(+0.1\sigma)$
$\Omega_c h^2$	0.11930	$0.1193^{+0.0045}_{-0.0045}$ $(-0.1\sigma)$	$H_0$	67.66	$67.6^{+2.5}_{-2.4}$ $(+0.0\sigma)$	$100\theta_*$	1.04120	$1.0412^{+0.0010}_{-0.0010}$ $(+0.1\sigma)$
$100\theta_{MC}$	1.04125	$1.0411^{+0.0019}_{-0.0018}$ $(+0.0\sigma)$	$\Omega_\Lambda$	0.6893	$0.689^{+0.030}_{-0.032}$ $(+0.1\sigma)$	$z_{drag}$	1060.05	$1059.9^{+2.6}_{-2.5}$ $(-0.1\sigma)$
$\tau$	0.0794	$0.082^{+0.042}_{-0.042}$ $(+0.0\sigma)$	$\Omega_m$	0.3107	$0.311^{+0.032}_{-0.030}$ $(-0.1\sigma)$	$r_{drag}$	147.31	$147.36^{+0.96}_{-0.94}$ $(+0.1\sigma)$
$Y_P$	0.2542	$0.250^{+0.041}_{-0.043}$ $(-0.1\sigma)$	$\Omega_m h^2$	0.14226	$0.1422^{+0.0041}_{-0.0041}$ $(-0.1\sigma)$	$k_D$	0.14024	$0.1403^{+0.0015}_{-0.0015}$ $(-0.0\sigma)$
$\ln(10^{10} A_s)$	3.091	$3.095^{+0.083}_{-0.078}$ $(-0.0\sigma)$	$\Omega_m h^3$	0.09626	$0.0962^{+0.0016}_{-0.0016}$ $(-0.0\sigma)$	$100\theta_D$	0.16129	$0.1611^{+0.0015}_{-0.0015}$ $(-0.1\sigma)$
$n_s$	0.9712	$0.971^{+0.024}_{-0.023}$ $(+0.1\sigma)$	$\sigma_8$	0.8305	$0.832^{+0.034}_{-0.032}$ $(-0.0\sigma)$	$z_{eq}$	3384	$3383^{+98}_{-98}$ $(-0.1\sigma)$
$y_{cal}$	0.9999	$1.0003^{+0.0051}_{-0.0048}$ $(-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	0.4629	$0.464^{+0.026}_{-0.026}$ $(-0.1\sigma)$	$100\theta_{eq}$	0.8166	$0.817^{+0.020}_{-0.019}$ $(+0.1\sigma)$
$A_{100}^{PS}$	251.5	$247^{+40}_{-50}$ $(-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	0.6201	$0.621^{+0.026}_{-0.026}$ $(-0.1\sigma)$	$r_{drag}/D_V(0.57)$	0.07163	$0.0716^{+0.0017}_{-0.0016}$ $(+0.1\sigma)$
$A_{143}^{PS}$	37.1	$40^{+20}_{-20}$ $(-0.6\sigma)$	$\sigma_8/h^{0.5}$	1.0096	$1.011^{+0.040}_{-0.039}$ $(-0.0\sigma)$	$H(0.57)$	93.08	$93.1^{+1.3}_{-1.2}$ $(+0.0\sigma)$
$A_{217}^{PS}$	95.3	$98^{+30}_{-30}$ $(+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	2.482	$2.488^{+0.092}_{-0.092}$ $(-0.1\sigma)$	$D_A(0.57)$	1386.5	$1387^{+34}_{-34}$ $(-0.0\sigma)$
$A_{217}^{CIB}$	48.4	$46^{+10}_{-10}$ $(-2.7\sigma)$	$z_{re}$	10.13	$10.2^{+3.6}_{-3.7}$ $(+0.0\sigma)$	$F_{AP}(0.57)$	0.6758	$0.6759^{+0.0079}_{-0.0077}$ $(-0.1\sigma)$
$A_{143}^{tSZ}$	3.20	$< 6.62$ $(-0.9\sigma)$	$10^9 A_s$	2.200	$2.21^{+0.19}_{-0.18}$ $(-0.0\sigma)$	$f\sigma_8(0.57)$	0.4827	$0.483^{+0.019}_{-0.019}$ $(-0.0\sigma)$
$r_{143 \times 217}^{PS}$	0.422	$0.52^{+0.22}_{-0.20}$	$10^9 A_s e^{-2\tau}$	1.8767	$1.877^{+0.029}_{-0.030}$ $(-0.4\sigma)$	$\sigma_8(0.57)$	0.6180	$0.619^{+0.028}_{-0.028}$ $(-0.0\sigma)$
$\xi^{tSZ \times CIB}$	0.00	—	$D_{40}$	1222.1	$1225^{+41}_{-40}$ $(-0.4\sigma)$	$f_{2000}^{143}$	30.4	$29^{+7}_{-7}$ $(-0.4\sigma)$
$A^{kSZ}$	5.4	—	$D_{220}$	5693	$5696^{+82}_{-81}$ $(-0.6\sigma)$	$f_{2000}^{217}$	107.5	$106.8^{+5.1}_{-5.3}$ $(+0.1\sigma)$
$A_{100}^{dust}$	0.993	$0.99^{+0.38}_{-0.38}$	$D_{810}$	2528.7	$2531^{+28}_{-28}$ $(-0.3\sigma)$	$f_{2000}^{143 \times 217}$	32.8	$32^{+6}_{-6}$ $(-0.3\sigma)$
$A_{143}^{dust}$	1.025	$1.03^{+0.36}_{-0.35}$	$D_{1420}$	812.3	$814^{+11}_{-10}$ $(-0.1\sigma)$	$\chi_{lowTEB}^2$	10495.3	$10496.7 (\nu: 3.4)$ $(-0.2\sigma)$
$A_{217}^{dust}$	1.214	$1.22^{+0.23}_{-0.23}$	$n_{s,0.002}$	0.9712	$0.971^{+0.024}_{-0.023}$ $(+0.1\sigma)$	$\chi_{CamSpec}^2$	8045.5	$8060.4 (\nu: 17.9)$
$A_{143 \times 217}^{dust}$	0.971	$0.98^{+0.35}_{-0.36}$	$Y_P$	0.2542	$0.250^{+0.041}_{-0.043}$ $(-0.1\sigma)$	$\chi_{prior}^2$	3.5	$8.5 (\nu: 6.2)$ $(+0.3\sigma)$
$c_{100}$	0.99670	$0.9968^{+0.0019}_{-0.0019}$ $(-1.4\sigma)$	Age/Gyr	13.790	$13.79^{+0.13}_{-0.13}$ $(-0.0\sigma)$	$\chi_{CMB}^2$	18540.7	$18557.1 (\nu: 17.1)$ $(+1282.4\sigma)$
$c_{217}$	0.99754	$0.9973^{+0.0035}_{-0.0035}$ $(+0.9\sigma)$	$z_*$	1090.29	$1090.2^{+1.3}_{-1.3}$ $(-0.1\sigma)$			

Best-fit  $\chi_{eff}^2 = 18544.26$ ;  $\Delta\chi_{eff}^2 = 7282.35$ ;  $\bar{\chi}_{eff}^2 = 18565.54$ ;  $\Delta\bar{\chi}_{eff}^2 = 7282.70$ ;  $R - 1 = 0.00828$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10495.28 ( $\Delta$  -0.95) CamSpec like\_v9.10CMH\_unified: 8045.45

### 23.16 base\_yhe\_CamSpecHM\_TT\_lowTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00050}_{-0.00050} \quad (-0.1\sigma)$	$\Omega_\Lambda$	$0.691^{+0.016}_{-0.016} \quad (+0.0\sigma)$	$k_D$	$0.1402^{+0.0011}_{-0.0011} \quad (+0.0\sigma)$
$\Omega_c h^2$	$0.1189^{+0.0025}_{-0.0025} \quad (-0.0\sigma)$	$\Omega_m$	$0.309^{+0.016}_{-0.016} \quad (-0.0\sigma)$	$100\theta_D$	$0.1612^{+0.0014}_{-0.0014} \quad (-0.1\sigma)$
$100\theta_{MC}$	$1.0412^{+0.0014}_{-0.0014} \quad (-0.0\sigma)$	$\Omega_m h^2$	$0.1419^{+0.0024}_{-0.0024} \quad (-0.1\sigma)$	$z_{eq}$	$3376^{+58}_{-58} \quad (-0.1\sigma)$
$\tau$	$0.083^{+0.035}_{-0.036} \quad (+0.0\sigma)$	$\Omega_m h^3$	$0.0962^{+0.0014}_{-0.0015} \quad (-0.1\sigma)$	$100\theta_{eq}$	$0.818^{+0.011}_{-0.010} \quad (+0.0\sigma)$
$Y_P$	$0.252^{+0.035}_{-0.038} \quad (-0.1\sigma)$	$\sigma_8$	$0.832^{+0.033}_{-0.032} \quad (-0.0\sigma)$	$r_{drag}/D_V(0.57)$	$0.07174^{+0.00089}_{-0.00086} \quad (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.097^{+0.073}_{-0.072} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.462^{+0.020}_{-0.020} \quad (-0.0\sigma)$	$H(0.57)$	$93.12^{+0.77}_{-0.73} \quad (-0.0\sigma)$
$n_s$	$0.972^{+0.017}_{-0.017} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.620^{+0.025}_{-0.025} \quad (-0.1\sigma)$	$D_A(0.57)$	$1385^{+18}_{-19} \quad (+0.0\sigma)$
$y_{cal}$	$1.0002^{+0.0050}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.011^{+0.039}_{-0.038} \quad (-0.0\sigma)$	$F_{AP}(0.57)$	$0.6754^{+0.0040}_{-0.0040} \quad (-0.0\sigma)$
$A_{100}^{PS}$	$247^{+40}_{-50} \quad (-0.5\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.485^{+0.085}_{-0.082} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.483^{+0.019}_{-0.019} \quad (-0.1\sigma)$
$A_{143}^{PS}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$z_{re}$	$10.3^{+3.2}_{-3.3} \quad (+0.0\sigma)$	$\sigma_8(0.57)$	$0.620^{+0.025}_{-0.024} \quad (-0.0\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s$	$2.21^{+0.17}_{-0.16} \quad (-0.1\sigma)$	$f_{2000}^{143}$	$29^{+7}_{-7} \quad (-0.4\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.029}_{-0.029} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$106.8^{+5.0}_{-5.3} \quad (+0.1\sigma)$
$A_{143}^{tSZ}$	$< 6.64 \quad (-0.9\sigma)$	$D_{40}$	$1223^{+32}_{-33} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+6}_{-6} \quad (-0.3\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.22}_{-0.21}$	$D_{220}$	$5696^{+80}_{-82} \quad (-0.6\sigma)$	$\chi_{lowTEB}^2$	$10496.3 \quad (\nu: 2.9) \quad (-0.2\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{810}$	$2530^{+28}_{-28} \quad (-0.4\sigma)$	$\chi_{CamSpec}^2$	$8060.1 \quad (\nu: 17.8)$
$A^{kSZ}$	—	$D_{1420}$	$814^{+11}_{-10} \quad (-0.1\sigma)$	$\chi_{6DF}^2$	$0.057 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{100}^{dust}$	$0.99^{+0.39}_{-0.38}$	$n_{s,0.002}$	$0.972^{+0.017}_{-0.017} \quad (+0.1\sigma)$	$\chi_{MGS}^2$	$1.45 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$A_{143}^{dust}$	$1.03^{+0.37}_{-0.35}$	$Y_P$	$0.252^{+0.035}_{-0.038} \quad (-0.1\sigma)$	$\chi_{DR11CMass}^2$	$2.90 \quad (\nu: 0.3) \quad (-0.0\sigma)$
$A_{217}^{dust}$	$1.22^{+0.22}_{-0.23}$	$Age/Gyr$	$13.788^{+0.088}_{-0.088} \quad (+0.1\sigma)$	$\chi_{DR11LOWZ}^2$	$0.66 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.34}_{-0.36}$	$z_*$	$1090.2^{+1.3}_{-1.3} \quad (-0.1\sigma)$	$\chi_{prior}^2$	$8.5 \quad (\nu: 6.1) \quad (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$r_*$	$144.72^{+0.75}_{-0.71} \quad (+0.1\sigma)$	$\chi_{CMB}^2$	$18556.4 \quad (\nu: 16.4) \quad (+1313.9\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$100\theta_*$	$1.04123^{+0.00084}_{-0.00083} \quad (+0.1\sigma)$	$\chi_{BAO}^2$	$5.1 \quad (\nu: 0.6) \quad (-0.0\sigma)$
$\beta_1^1$	$0.0^{+2.0}_{-2.0}$	$z_{drag}$	$1060.0^{+2.1}_{-2.2} \quad (-0.1\sigma)$		
$H_0$	$67.8^{+1.3}_{-1.3} \quad (-0.0\sigma)$	$r_{drag}$	$147.40^{+0.84}_{-0.80} \quad (+0.1\sigma)$		

$$\bar{\chi}_{eff}^2 = 18569.94; \Delta\bar{\chi}_{eff}^2 = 7282.55; R - 1 = 0.01217$$

### 23.17 base\_yhe\_CamSpecHM\_TT\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00064}_{-0.00063} \quad (-0.0\sigma)$	$\beta_1^1$	$0.0^{+2.0}_{-2.0}$	$r_*$	$144.73^{+0.88}_{-0.90} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1188^{+0.0042}_{-0.0041} \quad (-0.1\sigma)$	$H_0$	$67.9^{+2.3}_{-2.2} \quad (+0.0\sigma)$	$100\theta_*$	$1.0413^{+0.0010}_{-0.0010} \quad (+0.1\sigma)$
$100\theta_{MC}$	$1.0413^{+0.0018}_{-0.0018} \quad (+0.0\sigma)$	$\Omega_\Lambda$	$0.692^{+0.027}_{-0.029} \quad (+0.1\sigma)$	$z_{drag}$	$1060.0^{+2.5}_{-2.4} \quad (-0.1\sigma)$
$\tau$	$0.084^{+0.041}_{-0.041} \quad (+0.0\sigma)$	$\Omega_m$	$0.308^{+0.029}_{-0.027} \quad (-0.1\sigma)$	$r_{drag}$	$147.41^{+0.92}_{-0.91} \quad (+0.1\sigma)$
$Y_P$	$0.252^{+0.040}_{-0.042} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1418^{+0.0039}_{-0.0038} \quad (-0.1\sigma)$	$k_D$	$0.1402^{+0.0014}_{-0.0014} \quad (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.099^{+0.083}_{-0.078} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.0962^{+0.0016}_{-0.0016} \quad (-0.1\sigma)$	$100\theta_D$	$0.1612^{+0.0015}_{-0.0015} \quad (-0.1\sigma)$
$n_s$	$0.973^{+0.023}_{-0.022} \quad (+0.1\sigma)$	$\sigma_8$	$0.832^{+0.035}_{-0.032} \quad (-0.0\sigma)$	$z_{eq}$	$3374^{+92}_{-90} \quad (-0.1\sigma)$
$y_{cal}$	$1.0003^{+0.0051}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.462^{+0.026}_{-0.025} \quad (-0.1\sigma)$	$100\theta_{eq}$	$0.819^{+0.018}_{-0.018} \quad (+0.1\sigma)$
$A_{100}^{PS}$	$247^{+50}_{-50} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.620^{+0.026}_{-0.026} \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.0718^{+0.0016}_{-0.0015} \quad (+0.1\sigma)$
$A_{143}^{PS}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.011^{+0.040}_{-0.039} \quad (-0.0\sigma)$	$H(0.57)$	$93.2^{+1.2}_{-1.1} \quad (+0.0\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.484^{+0.090}_{-0.090} \quad (-0.2\sigma)$	$D_A(0.57)$	$1384^{+31}_{-31} \quad (-0.0\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$z_{re}$	$10.4^{+3.5}_{-3.7} \quad (+0.0\sigma)$	$F_{AP}(0.57)$	$0.6752^{+0.0072}_{-0.0069} \quad (-0.1\sigma)$
$A_{143}^{tSZ}$	$< 6.63 \quad (-0.9\sigma)$	$10^9 A_s$	$2.22^{+0.19}_{-0.18} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.483^{+0.020}_{-0.019} \quad (-0.0\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.21}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.029}_{-0.029} \quad (-0.4\sigma)$	$\sigma_8(0.57)$	$0.620^{+0.029}_{-0.026} \quad (-0.0\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{40}$	$1223^{+39}_{-38} \quad (-0.4\sigma)$	$f_{2000}^{143}$	$29^{+7}_{-7} \quad (-0.4\sigma)$
$A^{kSZ}$	—	$D_{220}$	$5697^{+82}_{-82} \quad (-0.6\sigma)$	$f_{2000}^{217}$	$106.9^{+5.1}_{-5.3} \quad (+0.1\sigma)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$D_{810}$	$2531^{+28}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+6}_{-6} \quad (-0.3\sigma)$
$A_{143}^{dust}$	$1.03^{+0.37}_{-0.35}$	$D_{1420}$	$814^{+11}_{-10} \quad (-0.1\sigma)$	$\chi_{lowTEB}^2$	$10496.5 \quad (\nu: 3.5) \quad (-0.2\sigma)$
$A_{217}^{dust}$	$1.21^{+0.22}_{-0.23}$	$n_{s,0.002}$	$0.973^{+0.023}_{-0.022} \quad (+0.1\sigma)$	$\chi_{CamSpec}^2$	$8060.5 \quad (\nu: 18.5)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.34}_{-0.36}$	$Y_P$	$0.252^{+0.040}_{-0.042} \quad (-0.1\sigma)$	$\chi_{JLA}^2$	$706.83 \quad (\nu: 0.1) \quad (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	Age/Gyr	$13.78^{+0.12}_{-0.12} \quad (+0.0\sigma)$	$\chi_{prior}^2$	$8.5 \quad (\nu: 6.1) \quad (+0.3\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$z_*$	$1090.2^{+1.3}_{-1.3} \quad (-0.1\sigma)$	$\chi_{CMB}^2$	$18557.0 \quad (\nu: 17.2) \quad (+1293.8\sigma)$

$$\bar{\chi}_{eff}^2 = 19272.28; \Delta\bar{\chi}_{eff}^2 = 7282.68; R - 1 = 0.00796$$

### 23.18 base\_yhe\_CamSpecHM\_TT\_lowTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02231^{+0.00067}_{-0.00065} \quad (-0.0\sigma)$	$\beta_1^1$	$0.0^{+2.0}_{-2.0}$	$r_*$	$144.92^{+0.82}_{-0.84} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1183^{+0.0041}_{-0.0041} \quad (-0.0\sigma)$	$H_0$	$68.0^{+2.4}_{-2.2} \quad (+0.0\sigma)$	$100\theta_*$	$1.0413^{+0.0010}_{-0.00099} \quad (+0.1\sigma)$
$100\theta_{MC}$	$1.0412^{+0.0018}_{-0.0018} \quad (-0.0\sigma)$	$\Omega_\Lambda$	$0.694^{+0.028}_{-0.028} \quad (+0.0\sigma)$	$z_{drag}$	$1059.8^{+2.6}_{-2.5} \quad (-0.1\sigma)$
$\tau$	$0.071^{+0.036}_{-0.036} \quad (+0.1\sigma)$	$\Omega_m$	$0.306^{+0.028}_{-0.028} \quad (-0.0\sigma)$	$r_{drag}$	$147.61^{+0.84}_{-0.86} \quad (+0.1\sigma)$
$Y_P$	$0.249^{+0.041}_{-0.044} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1412^{+0.0037}_{-0.0036} \quad (-0.0\sigma)$	$k_D$	$0.1401^{+0.0014}_{-0.0014} \quad (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.070^{+0.069}_{-0.064} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.0960^{+0.0016}_{-0.0016} \quad (-0.0\sigma)$	$100\theta_D$	$0.1611^{+0.0015}_{-0.0015} \quad (-0.1\sigma)$
$n_s$	$0.972^{+0.024}_{-0.023} \quad (+0.1\sigma)$	$\sigma_8$	$0.819^{+0.024}_{-0.022} \quad (+0.1\sigma)$	$z_{eq}$	$3359^{+90}_{-87} \quad (-0.0\sigma)$
$y_{cal}$	$1.0000^{+0.0049}_{-0.0047} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.018}_{-0.018} \quad (+0.1\sigma)$	$100\theta_{eq}$	$0.821^{+0.018}_{-0.018} \quad (+0.0\sigma)$
$A_{100}^{PS}$	$248^{+50}_{-50} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.015}_{-0.015} \quad (+0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.0720^{+0.0016}_{-0.0017} \quad (+0.0\sigma)$
$A_{143}^{PS}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$0.992^{+0.023}_{-0.023} \quad (+0.1\sigma)$	$H(0.57)$	$93.2^{+1.3}_{-1.2} \quad (-0.0\sigma)$
$A_{217}^{PS}$	$97^{+30}_{-20} \quad (+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.445^{+0.055}_{-0.056} \quad (-0.0\sigma)$	$D_A(0.57)$	$1382^{+32}_{-33} \quad (-0.0\sigma)$
$A_{217}^{CIB}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$z_{re}$	$9.2^{+3.1}_{-3.3} \quad (+0.1\sigma)$	$F_{AP}(0.57)$	$0.6745^{+0.0072}_{-0.0072} \quad (-0.0\sigma)$
$A_{143}^{tSZ}$	$< 6.57 \quad (-0.9\sigma)$	$10^9 A_s$	$2.16^{+0.15}_{-0.15} \quad (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.474^{+0.011}_{-0.011} \quad (+0.1\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.22}_{-0.20}$	$10^9 A_s e^{-2\tau}$	$1.871^{+0.029}_{-0.028} \quad (-0.3\sigma)$	$\sigma_8(0.57)$	$0.610^{+0.023}_{-0.021} \quad (+0.1\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{40}$	$1217^{+38}_{-38} \quad (-0.3\sigma)$	$f_{2000}^{143}$	$30^{+7}_{-7} \quad (-0.4\sigma)$
$A^{kSZ}$	—	$D_{220}$	$5695^{+80}_{-82} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$106.9^{+5.0}_{-5.3} \quad (+0.1\sigma)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$D_{810}$	$2529^{+27}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+6}_{-6} \quad (-0.3\sigma)$
$A_{143}^{dust}$	$1.03^{+0.37}_{-0.35}$	$D_{1420}$	$814^{+10}_{-10} \quad (-0.0\sigma)$	$\chi_{lensing}^2$	$9.9 \quad (\nu: 1.1) \quad (-0.1\sigma)$
$A_{217}^{dust}$	$1.21^{+0.22}_{-0.22}$	$n_{s,0.002}$	$0.972^{+0.024}_{-0.023} \quad (+0.1\sigma)$	$\chi_{lowTEB}^2$	$10495.1 \quad (\nu: 1.6) \quad (-0.2\sigma)$
$A_{143 \times 217}^{dust}$	$0.99^{+0.35}_{-0.35}$	$Y_P$	$0.249^{+0.041}_{-0.044} \quad (-0.1\sigma)$	$\chi_{CamSpec}^2$	$8062.1 \quad (\nu: 17.9)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	Age/Gyr	$13.79^{+0.12}_{-0.13} \quad (+0.0\sigma)$	$\chi_{prior}^2$	$8.4 \quad (\nu: 6.0) \quad (+0.2\sigma)$
$c_{217}$	$0.9974^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$z_*$	$1090.0^{+1.3}_{-1.3} \quad (-0.1\sigma)$	$\chi_{CMB}^2$	$18567.1 \quad (\nu: 17.8) \quad (+1247.3\sigma)$

$$\bar{\chi}_{eff}^2 = 18575.53; \Delta\bar{\chi}_{eff}^2 = 7282.07; R - 1 = 0.02011$$

### 23.19 base\_yhe\_CamSpecHM\_TT\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00065}_{-0.00063} \quad (-0.0\sigma)$	$\beta_1^1$	$0.0^{+2.0}_{-2.0}$	$r_*$	$144.75^{+0.91}_{-0.92} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1186^{+0.0043}_{-0.0043} \quad (-0.1\sigma)$	$H_0$	$68.0^{+2.4}_{-2.3} \quad (+0.0\sigma)$	$100\theta_*$	$1.04129^{+0.00099}_{-0.0010} \quad (+0.1\sigma)$
$100\theta_{MC}$	$1.0413^{+0.0018}_{-0.0018} \quad (+0.0\sigma)$	$\Omega_\Lambda$	$0.693^{+0.028}_{-0.030} \quad (+0.1\sigma)$	$z_{drag}$	$1060.2^{+2.5}_{-2.5} \quad (-0.1\sigma)$
$\tau$	$0.085^{+0.043}_{-0.039} \quad (+0.0\sigma)$	$\Omega_m$	$0.307^{+0.030}_{-0.028} \quad (-0.1\sigma)$	$r_{drag}$	$147.42^{+0.93}_{-0.93} \quad (+0.1\sigma)$
$Y_P$	$0.254^{+0.039}_{-0.042} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1417^{+0.0040}_{-0.0039} \quad (-0.1\sigma)$	$k_D$	$0.1402^{+0.0014}_{-0.0015} \quad (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.102^{+0.086}_{-0.079} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.0963^{+0.0016}_{-0.0016} \quad (-0.1\sigma)$	$100\theta_D$	$0.1612^{+0.0015}_{-0.0015} \quad (-0.1\sigma)$
$n_s$	$0.974^{+0.023}_{-0.023} \quad (+0.1\sigma)$	$\sigma_8$	$0.833^{+0.035}_{-0.032} \quad (-0.0\sigma)$	$z_{eq}$	$3370^{+96}_{-93} \quad (-0.1\sigma)$
$y_{cal}$	$1.0003^{+0.0051}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.461^{+0.026}_{-0.025} \quad (-0.1\sigma)$	$100\theta_{eq}$	$0.820^{+0.019}_{-0.019} \quad (+0.1\sigma)$
$A_{100}^{PS}$	$248^{+50}_{-50} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.620^{+0.026}_{-0.026} \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.0719^{+0.0017}_{-0.0017} \quad (+0.1\sigma)$
$A_{143}^{PS}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.011^{+0.040}_{-0.039} \quad (-0.0\sigma)$	$H(0.57)$	$93.2^{+1.3}_{-1.2} \quad (+0.0\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.483^{+0.091}_{-0.091} \quad (-0.2\sigma)$	$D_A(0.57)$	$1382^{+32}_{-33} \quad (-0.0\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$z_{re}$	$10.5^{+3.6}_{-3.7} \quad (+0.0\sigma)$	$F_{AP}(0.57)$	$0.6748^{+0.0074}_{-0.0073} \quad (-0.1\sigma)$
$A_{143}^{tSZ}$	$< 6.61 \quad (-0.9\sigma)$	$10^9 A_s$	$2.23^{+0.19}_{-0.18} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.483^{+0.020}_{-0.019} \quad (-0.0\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.22}_{-0.21}$	$10^9 A_s e^{-2\tau}$	$1.876^{+0.029}_{-0.030} \quad (-0.4\sigma)$	$\sigma_8(0.57)$	$0.621^{+0.029}_{-0.028} \quad (-0.0\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{40}$	$1221^{+40}_{-39} \quad (-0.4\sigma)$	$f_{2000}^{143}$	$30^{+7}_{-7} \quad (-0.4\sigma)$
$A^{kSZ}$	—	$D_{220}$	$5698^{+82}_{-81} \quad (-0.6\sigma)$	$f_{2000}^{217}$	$106.9^{+5.1}_{-5.3} \quad (+0.1\sigma)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$D_{810}$	$2531^{+28}_{-27} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+6}_{-6} \quad (-0.3\sigma)$
$A_{143}^{dust}$	$1.03^{+0.37}_{-0.35}$	$D_{1420}$	$814^{+11}_{-10} \quad (-0.1\sigma)$	$\chi_{lowTEB}^2$	$10496.5 \quad (\nu: 3.7) \quad (-0.2\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.974^{+0.023}_{-0.023} \quad (+0.1\sigma)$	$\chi_{CamSpec}^2$	$8060.6 \quad (\nu: 18.8)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.34}_{-0.36}$	$Y_P$	$0.254^{+0.039}_{-0.042} \quad (-0.1\sigma)$	$\chi_{H070p6}^2$	$0.74 \quad (\nu: 0.2) \quad (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	Age/Gyr	$13.78^{+0.12}_{-0.13} \quad (+0.0\sigma)$	$\chi_{prior}^2$	$8.4 \quad (\nu: 6.1) \quad (+0.3\sigma)$
$c_{217}$	$0.9973^{+0.0035}_{-0.0035} \quad (+0.9\sigma)$	$z_*$	$1090.2^{+1.3}_{-1.3} \quad (-0.1\sigma)$	$\chi_{CMB}^2$	$18557.1 \quad (\nu: 17.4) \quad (+1286.5\sigma)$

$$\bar{\chi}_{eff}^2 = 18566.28; \Delta\bar{\chi}_{eff}^2 = 7282.66; R - 1 = 0.00827$$

### 23.20 base\_yhe\_CamSpecHM\_TT\_lowTEB\_post\_lensing\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02230^{+0.00051}_{-0.00048} \quad (-0.1\sigma)$	$\Omega_m$	$0.306^{+0.015}_{-0.014} \quad (-0.0\sigma)$	$z_{\text{eq}}$	$3360^{+55}_{-53} \quad (-0.1\sigma)$
$\Omega_c h^2$	$0.1183^{+0.0024}_{-0.0023} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1413^{+0.0023}_{-0.0022} \quad (-0.1\sigma)$	$100\theta_{\text{eq}}$	$0.821^{+0.010}_{-0.010} \quad (+0.1\sigma)$
$100\theta_{\text{MC}}$	$1.0412^{+0.0014}_{-0.0014} \quad (-0.1\sigma)$	$\Omega_m h^3$	$0.0960^{+0.0014}_{-0.0014} \quad (-0.1\sigma)$	$r_{\text{drag}}/D_V(0.57)$	$0.07193^{+0.00084}_{-0.00083} \quad (+0.0\sigma)$
$\tau$	$0.070^{+0.025}_{-0.025} \quad (+0.2\sigma)$	$\sigma_8$	$0.819^{+0.020}_{-0.020} \quad (+0.1\sigma)$	$H(0.57)$	$93.16^{+0.74}_{-0.73} \quad (-0.0\sigma)$
$Y_P$	$0.249^{+0.037}_{-0.038} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.013}_{-0.013} \quad (+0.1\sigma)$	$D_A(0.57)$	$1383^{+18}_{-18} \quad (+0.0\sigma)$
$\ln(10^{10} A_s)$	$3.070^{+0.049}_{-0.049} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.609^{+0.015}_{-0.015} \quad (+0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6745^{+0.0038}_{-0.0037} \quad (-0.0\sigma)$
$n_s$	$0.972^{+0.016}_{-0.016} \quad (+0.2\sigma)$	$\sigma_8/h^{0.5}$	$0.993^{+0.023}_{-0.023} \quad (+0.2\sigma)$	$f\sigma_8(0.57)$	$0.474^{+0.011}_{-0.011} \quad (+0.1\sigma)$
$y_{\text{cal}}$	$0.99996^{+0.0047}_{-0.0047} \quad (-0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.445^{+0.052}_{-0.054} \quad (+0.0\sigma)$	$\sigma_8(0.57)$	$0.610^{+0.017}_{-0.017} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$248^{+50}_{-50} \quad (-0.5\sigma)$	$z_{\text{re}}$	$9.2^{+2.3}_{-2.4} \quad (+0.2\sigma)$	$f_{2000}^{143}$	$30^{+7}_{-7} \quad (-0.4\sigma)$
$A_{143}^{\text{PS}}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$10^9 A_s$	$2.15^{+0.11}_{-0.10} \quad (+0.1\sigma)$	$f_{2000}^{217}$	$106.8^{+5.1}_{-5.3} \quad (+0.0\sigma)$
$A_{217}^{\text{PS}}$	$97^{+30}_{-30} \quad (+0.1\sigma)$	$10^9 A_s e^{-2\tau}$	$1.870^{+0.028}_{-0.028} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+6}_{-6} \quad (-0.4\sigma)$
$A_{217}^{\text{CIB}}$	$47^{+10}_{-10} \quad (-2.7\sigma)$	$D_{40}$	$1216^{+32}_{-32} \quad (-0.4\sigma)$	$\chi_{\text{lensing}}^2$	$9.9 \quad (\nu: 1.0) \quad (-0.0\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.58 \quad (-0.9\sigma)$	$D_{220}$	$5694^{+76}_{-81} \quad (-0.6\sigma)$	$\chi_{\text{lowTEB}}^2$	$10494.8 \quad (\nu: 1.1) \quad (-0.2\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.51^{+0.22}_{-0.20}$	$D_{810}$	$2528^{+27}_{-27} \quad (-0.3\sigma)$	$\chi_{\text{CamSpec}}^2$	$8061.8 \quad (\nu: 17.3)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{1420}$	$814^{+10}_{-10} \quad (-0.0\sigma)$	$\chi_{\text{H070p6}}^2$	$0.65 \quad (\nu: 0.0) \quad (+0.0\sigma)$
$A^{\text{kSZ}}$	—	$n_{\text{s},0.002}$	$0.972^{+0.016}_{-0.016} \quad (+0.2\sigma)$	$\chi_{\text{JLA}}^2$	$706.65 \quad (\nu: 0.0) \quad (-0.0\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.38}_{-0.38}$	$Y_P$	$0.249^{+0.037}_{-0.038} \quad (-0.1\sigma)$	$\chi_{6\text{DF}}^2$	$0.041 \quad (\nu: 0.0) \quad (+0.0\sigma)$
$A_{143}^{\text{dust}}$	$1.02^{+0.37}_{-0.34}$	$\text{Age/Gyr}$	$13.789^{+0.085}_{-0.086} \quad (+0.1\sigma)$	$\chi_{\text{MGS}}^2$	$1.70 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$A_{217}^{\text{dust}}$	$1.21^{+0.22}_{-0.22}$	$z_*$	$1090.0^{+1.3}_{-1.3} \quad (-0.1\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.89 \quad (\nu: 0.2) \quad (+0.0\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.99^{+0.35}_{-0.35}$	$r_*$	$144.91^{+0.70}_{-0.70} \quad (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.44 \quad (\nu: 0.1) \quad (-0.0\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	$100\theta_*$	$1.04130^{+0.00083}_{-0.00080} \quad (+0.1\sigma)$	$\chi_{\text{prior}}^2$	$8.4 \quad (\nu: 5.9) \quad (+0.2\sigma)$
$c_{217}$	$0.9974^{+0.0034}_{-0.0036} \quad (+0.9\sigma)$	$z_{\text{drag}}$	$1059.8^{+2.0}_{-2.1} \quad (-0.1\sigma)$	$\chi_{\text{CMB}}^2$	$18566.5 \quad (\nu: 17.1) \quad (+1277.6\sigma)$
$\beta_1^1$	$0.0^{+2.0}_{-2.0}$	$r_{\text{drag}}$	$147.61^{+0.79}_{-0.78} \quad (+0.1\sigma)$	$\chi_{\text{BAO}}^2$	$5.1 \quad (\nu: 0.5) \quad (+0.0\sigma)$
$H_0$	$68.0^{+1.3}_{-1.2} \quad (-0.0\sigma)$	$k_D$	$0.1401^{+0.0011}_{-0.0011} \quad (+0.1\sigma)$		
$\Omega_\Lambda$	$0.694^{+0.014}_{-0.015} \quad (+0.0\sigma)$	$100\theta_D$	$0.1611^{+0.0014}_{-0.0015} \quad (-0.1\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 19287.29; \Delta\bar{\chi}_{\text{eff}}^2 = 7282.14; R - 1 = 0.02400$$

### 23.21 base\_yhe\_CamSpecHM\_TT\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02231^{+0.00066}_{-0.00064} \quad (-0.0\sigma)$	$\beta_1^1$	$0.0^{+2.0}_{-2.0}$	$r_*$	$144.67^{+0.93}_{-0.92} \quad (+0.1\sigma)$
$\Omega_c h^2$	$0.1192^{+0.0044}_{-0.0044} \quad (-0.1\sigma)$	$H_0$	$67.7^{+2.5}_{-2.3} \quad (+0.0\sigma)$	$100\theta_*$	$1.0412^{+0.0010}_{-0.0010} \quad (+0.1\sigma)$
$100\theta_{MC}$	$1.0412^{+0.0018}_{-0.0018} \quad (+0.0\sigma)$	$\Omega_\Lambda$	$0.689^{+0.029}_{-0.031} \quad (+0.1\sigma)$	$z_{drag}$	$1059.9^{+2.6}_{-2.5} \quad (-0.1\sigma)$
$\tau$	$0.083^{+0.037}_{-0.038} \quad (+0.0\sigma)$	$\Omega_m$	$0.311^{+0.031}_{-0.029} \quad (-0.1\sigma)$	$r_{drag}$	$147.36^{+0.94}_{-0.94} \quad (+0.1\sigma)$
$Y_P$	$0.251^{+0.041}_{-0.043} \quad (-0.1\sigma)$	$\Omega_m h^2$	$0.1421^{+0.0040}_{-0.0041} \quad (-0.1\sigma)$	$k_D$	$0.1403^{+0.0015}_{-0.0015} \quad (-0.0\sigma)$
$\ln(10^{10} A_s)$	$3.097^{+0.077}_{-0.077} \quad (-0.0\sigma)$	$\Omega_m h^3$	$0.0962^{+0.0016}_{-0.0016} \quad (-0.0\sigma)$	$100\theta_D$	$0.1612^{+0.0015}_{-0.0015} \quad (-0.1\sigma)$
$n_s$	$0.971^{+0.024}_{-0.023} \quad (+0.2\sigma)$	$\sigma_8$	$0.833^{+0.033}_{-0.031} \quad (-0.0\sigma)$	$z_{eq}$	$3381^{+96}_{-97} \quad (-0.1\sigma)$
$y_{cal}$	$1.0002^{+0.0051}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.464^{+0.026}_{-0.026} \quad (-0.1\sigma)$	$100\theta_{eq}$	$0.817^{+0.020}_{-0.019} \quad (+0.1\sigma)$
$A_{100}^{PS}$	$247^{+50}_{-50} \quad (-0.5\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.622^{+0.026}_{-0.026} \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.0717^{+0.0017}_{-0.0016} \quad (+0.1\sigma)$
$A_{143}^{PS}$	$40^{+20}_{-20} \quad (-0.6\sigma)$	$\sigma_8/h^{0.5}$	$1.012^{+0.039}_{-0.037} \quad (-0.1\sigma)$	$H(0.57)$	$93.1^{+1.3}_{-1.3} \quad (+0.0\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.490^{+0.092}_{-0.089} \quad (-0.2\sigma)$	$D_A(0.57)$	$1387^{+33}_{-34} \quad (-0.0\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.7\sigma)$	$z_{re}$	$10.3^{+3.1}_{-3.7} \quad (+0.0\sigma)$	$F_{AP}(0.57)$	$0.6758^{+0.0077}_{-0.0076} \quad (-0.1\sigma)$
$A_{143}^{tSZ}$	$< 6.66 \quad (-0.9\sigma)$	$10^9 A_s$	$2.22^{+0.17}_{-0.17} \quad (-0.0\sigma)$	$f\sigma_8(0.57)$	$0.484^{+0.019}_{-0.018} \quad (-0.1\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.20}$	$10^9 A_s e^{-2\tau}$	$1.877^{+0.029}_{-0.029} \quad (-0.4\sigma)$	$\sigma_8(0.57)$	$0.620^{+0.027}_{-0.026} \quad (-0.0\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{40}$	$1225^{+41}_{-40} \quad (-0.4\sigma)$	$f_{2000}^{143}$	$29^{+7}_{-7} \quad (-0.4\sigma)$
$A^{kSZ}$	—	$D_{220}$	$5695^{+82}_{-82} \quad (-0.6\sigma)$	$f_{2000}^{217}$	$106.8^{+5.1}_{-5.4} \quad (+0.1\sigma)$
$A_{100}^{dust}$	$0.99^{+0.38}_{-0.38}$	$D_{810}$	$2531^{+28}_{-28} \quad (-0.3\sigma)$	$f_{2000}^{143 \times 217}$	$32^{+6}_{-6} \quad (-0.3\sigma)$
$A_{143}^{dust}$	$1.03^{+0.36}_{-0.35}$	$D_{1420}$	$814^{+11}_{-11} \quad (-0.1\sigma)$	$\chi_{lowTEB}^2$	$10496.7 \quad (\nu: 3.5) \quad (-0.2\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.971^{+0.024}_{-0.023} \quad (+0.2\sigma)$	$\chi_{CamSpec}^2$	$8060.3 \quad (\nu: 18.4)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.34}_{-0.36}$	$Y_P$	$0.251^{+0.041}_{-0.043} \quad (-0.1\sigma)$	$\chi_{prior}^2$	$8.5 \quad (\nu: 6.2) \quad (+0.3\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.4\sigma)$	Age/Gyr	$13.79^{+0.12}_{-0.13} \quad (-0.0\sigma)$	$\chi_{CMB}^2$	$18557.0 \quad (\nu: 17.3) \quad (+1307.2\sigma)$
$c_{217}$	$0.9973^{+0.0034}_{-0.0035} \quad (+0.9\sigma)$	$z_*$	$1090.2^{+1.3}_{-1.3} \quad (-0.1\sigma)$		

$$\bar{\chi}_{eff}^2 = 18565.51; \Delta\bar{\chi}_{eff}^2 = 7282.82; R - 1 = 0.00825$$

## 23.22 base\_yhe\_CamSpecHM\_TTTEEE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.022365	$0.02235^{+0.00045}_{-0.00043}$ (+0.2 $\sigma$ )	$c_{EE}$	1.0011	$1.001^{+0.011}_{-0.011}$	$r_*$	144.66	$144.69^{+0.63}_{-0.64}$ (+0.5 $\sigma$ )
$\Omega_c h^2$	0.11911	$0.1191^{+0.0030}_{-0.0029}$ (-0.4 $\sigma$ )	$\beta_1$	-0.17	$-0.1^{+1.9}_{-2.0}$	$100\theta_*$	1.04105	$1.04102^{+0.00067}_{-0.00065}$ (-0.0 $\sigma$ )
$100\theta_{MC}$	1.04087	$1.0408^{+0.0014}_{-0.0013}$ (-0.3 $\sigma$ )	$H_0$	67.64	$67.6^{+1.6}_{-1.6}$ (+0.3 $\sigma$ )	$z_{drag}$	1059.86	$1059.8^{+1.9}_{-1.8}$ (-0.2 $\sigma$ )
$\tau$	0.0779	$0.078^{+0.036}_{-0.035}$ (-0.2 $\sigma$ )	$\Omega_\Lambda$	0.6894	$0.689^{+0.019}_{-0.020}$ (+0.3 $\sigma$ )	$r_{drag}$	147.33	$147.36^{+0.65}_{-0.66}$ (+0.4 $\sigma$ )
$Y_P$	0.2456	$0.243^{+0.033}_{-0.033}$ (-0.5 $\sigma$ )	$\Omega_m$	0.3106	$0.311^{+0.020}_{-0.019}$ (-0.3 $\sigma$ )	$k_D$	0.14060	$0.1407^{+0.0011}_{-0.0011}$ (+0.4 $\sigma$ )
$\ln(10^{10} A_s)$	3.086	$3.086^{+0.072}_{-0.069}$ (-0.4 $\sigma$ )	$\Omega_m h^2$	0.14212	$0.1421^{+0.0027}_{-0.0026}$ (-0.4 $\sigma$ )	$100\theta_D$	0.16079	$0.1607^{+0.0012}_{-0.0012}$ (-0.8 $\sigma$ )
$n_s$	0.9679	$0.967^{+0.018}_{-0.017}$ (+0.1 $\sigma$ )	$\Omega_m h^3$	0.09614	$0.0961^{+0.0012}_{-0.0011}$ (-0.2 $\sigma$ )	$z_{eq}$	3381	$3381^{+65}_{-63}$ (-0.4 $\sigma$ )
$y_{cal}$	1.00008	$1.0003^{+0.0048}_{-0.0049}$ (-0.1 $\sigma$ )	$\sigma_8$	0.8263	$0.826^{+0.030}_{-0.028}$ (-0.5 $\sigma$ )	$100\theta_{eq}$	0.8171	$0.817^{+0.013}_{-0.013}$ (+0.4 $\sigma$ )
$A_{100}^{PS}$	245.1	$243^{+40}_{-50}$ (-0.7 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4605	$0.461^{+0.019}_{-0.019}$ (-0.7 $\sigma$ )	$r_{drag}/D_V(0.57)$	0.07161	$0.0716^{+0.0011}_{-0.0011}$ (+0.3 $\sigma$ )
$A_{143}^{PS}$	35.1	$38^{+20}_{-20}$ (-0.8 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6168	$0.617^{+0.021}_{-0.021}$ (-0.7 $\sigma$ )	$H(0.57)$	93.04	$93.01^{+0.85}_{-0.79}$ (+0.1 $\sigma$ )
$A_{217}^{PS}$	97.7	$99^{+30}_{-30}$ (+0.1 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0046	$1.005^{+0.034}_{-0.034}$ (-0.6 $\sigma$ )	$D_A(0.57)$	1387.0	$1388^{+22}_{-22}$ (-0.2 $\sigma$ )
$A_{217}^{CIB}$	47.4	$45^{+10}_{-10}$ (-2.9 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.482	$2.483^{+0.077}_{-0.080}$ (-0.6 $\sigma$ )	$F_{AP}(0.57)$	0.6758	$0.6759^{+0.0051}_{-0.0050}$ (-0.3 $\sigma$ )
$A_{143}^{tSZ}$	3.96	< 6.86 (-1.0 $\sigma$ )	$z_{re}$	9.93	$9.8^{+3.3}_{-3.3}$ (-0.3 $\sigma$ )	$f\sigma_8(0.57)$	0.4802	$0.480^{+0.016}_{-0.016}$ (-0.6 $\sigma$ )
$r_{143 \times 217}^{PS}$	0.438	$0.52^{+0.23}_{-0.22}$	$10^9 A_s$	2.189	$2.19^{+0.16}_{-0.15}$ (-0.4 $\sigma$ )	$\sigma_8(0.57)$	0.6149	$0.615^{+0.024}_{-0.022}$ (-0.4 $\sigma$ )
$\xi^{tSZ \times CIB}$	0.00	—	$10^9 A_s e^{-2\tau}$	1.8734	$1.873^{+0.026}_{-0.026}$ (-0.9 $\sigma$ )	$f_{2000}^{143}$	28.7	$28^{+6}_{-7}$ (-0.7 $\sigma$ )
$A^{kSZ}$	3.9	—	$D_{40}$	1228.6	$1230^{+33}_{-33}$ (-0.5 $\sigma$ )	$f_{2000}^{217}$	106.25	$105.7^{+4.6}_{-4.7}$ (-0.2 $\sigma$ )
$A_{100}^{dust}$	1.003	$0.98^{+0.38}_{-0.38}$	$D_{220}$	5710	$5711^{+73}_{-75}$ (-0.4 $\sigma$ )	$f_{2000}^{143 \times 217}$	31.4	$31^{+5}_{-5}$ (-0.8 $\sigma$ )
$A_{143}^{dust}$	1.010	$1.02^{+0.36}_{-0.36}$	$D_{810}$	2529.1	$2530^{+26}_{-27}$ (-0.5 $\sigma$ )	$\chi_{lowTEB}^2$	10495.79	$10496.7 (\nu: 2.4)$ (-0.4 $\sigma$ )
$A_{217}^{dust}$	1.211	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	814.2	$815.1^{+9.5}_{-9.6}$ (+0.2 $\sigma$ )	$\chi_{CamSpec}^2$	12936.2	$12953.0 (\nu: 18.5)$
$A_{143 \times 217}^{dust}$	0.966	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	0.9679	$0.967^{+0.018}_{-0.017}$ (+0.1 $\sigma$ )	$\chi_{prior}^2$	3.4	$9.1 (\nu: 6.3)$ (-1.9 $\sigma$ )
$c_{100}$	0.99676	$0.9968^{+0.0019}_{-0.0019}$ (-1.7 $\sigma$ )	$Y_P$	0.2456	$0.243^{+0.033}_{-0.033}$ (-0.5 $\sigma$ )	$\chi_{CMB}^2$	23432.0	$23449.7 (\nu: 18.3)$ (+1542.1 $\sigma$ )
$c_{217}$	0.99719	$0.9970^{+0.0034}_{-0.0035}$ (+0.7 $\sigma$ )	Age/Gyr	13.796	$13.800^{+0.084}_{-0.088}$ (-0.0 $\sigma$ )			
$c_{TE}$	1.0043	$1.0041^{+0.0092}_{-0.0093}$	$z_*$	1089.86	$1089.8^{+1.0}_{-1.0}$ (-0.9 $\sigma$ )			

Best-fit  $\chi_{eff}^2 = 23435.47$ ;  $\Delta\chi_{eff}^2 = 10499.99$ ;  $\bar{\chi}_{eff}^2 = 23458.73$ ;  $\Delta\bar{\chi}_{eff}^2 = 10490.38$ ;  $R - 1 = 0.00713$

$\chi_{eff}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.79 ( $\Delta$  -1.18) CamSpec like.v9.10CMH\_unified: 12936.23



### 23.23 base\_yhe\_CamSpecHM\_TTTEEE\_lowTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02238^{+0.00038}_{-0.00036} \quad (+0.1\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$z_{\text{drag}}$	$1059.8^{+1.7}_{-1.7} \quad (-0.3\sigma)$
$\Omega_c h^2$	$0.1189^{+0.0021}_{-0.0021} \quad (-0.4\sigma)$	$H_0$	$67.7^{+1.1}_{-1.1} \quad (+0.1\sigma)$	$r_{\text{drag}}$	$147.39^{+0.60}_{-0.62} \quad (+0.3\sigma)$
$100\theta_{\text{MC}}$	$1.0409^{+0.0012}_{-0.0012} \quad (-0.4\sigma)$	$\Omega_\Lambda$	$0.691^{+0.013}_{-0.014} \quad (+0.2\sigma)$	$k_{\text{D}}$	$0.14059^{+0.00094}_{-0.00092} \quad (+0.6\sigma)$
$\tau$	$0.079^{+0.033}_{-0.033} \quad (-0.3\sigma)$	$\Omega_{\text{m}}$	$0.309^{+0.014}_{-0.013} \quad (-0.2\sigma)$	$100\theta_{\text{D}}$	$0.1607^{+0.0012}_{-0.0012} \quad (-0.8\sigma)$
$Y_{\text{P}}$	$0.244^{+0.030}_{-0.032} \quad (-0.6\sigma)$	$\Omega_{\text{m}} h^2$	$0.1419^{+0.0020}_{-0.0020} \quad (-0.4\sigma)$	$z_{\text{eq}}$	$3375^{+47}_{-47} \quad (-0.4\sigma)$
$\ln(10^{10} A_{\text{s}})$	$3.088^{+0.067}_{-0.066} \quad (-0.5\sigma)$	$\Omega_{\text{m}} h^3$	$0.0961^{+0.0011}_{-0.0011} \quad (-0.3\sigma)$	$100\theta_{\text{eq}}$	$0.8182^{+0.0090}_{-0.0089} \quad (+0.3\sigma)$
$n_{\text{s}}$	$0.969^{+0.014}_{-0.014} \quad (-0.0\sigma)$	$\sigma_8$	$0.826^{+0.029}_{-0.028} \quad (-0.6\sigma)$	$r_{\text{drag}}/D_{\text{V}}(0.57)$	$0.07169^{+0.00076}_{-0.00074} \quad (+0.2\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0048}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8 \Omega_{\text{m}}^{0.5}$	$0.460^{+0.017}_{-0.017} \quad (-0.6\sigma)$	$H(0.57)$	$93.07^{+0.63}_{-0.60} \quad (-0.0\sigma)$
$A_{100}^{\text{PS}}$	$243^{+40}_{-50} \quad (-0.7\sigma)$	$\sigma_8 \Omega_{\text{m}}^{0.25}$	$0.616^{+0.021}_{-0.021} \quad (-0.6\sigma)$	$D_{\text{A}}(0.57)$	$1386^{+15}_{-15} \quad (-0.1\sigma)$
$A_{143}^{\text{PS}}$	$38^{+20}_{-20} \quad (-0.8\sigma)$	$\sigma_8/h^{0.5}$	$1.004^{+0.034}_{-0.033} \quad (-0.6\sigma)$	$F_{\text{AP}}(0.57)$	$0.6755^{+0.0034}_{-0.0034} \quad (-0.2\sigma)$
$A_{217}^{\text{PS}}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.480^{+0.075}_{-0.076} \quad (-0.6\sigma)$	$f\sigma_8(0.57)$	$0.480^{+0.016}_{-0.016} \quad (-0.6\sigma)$
$A_{217}^{\text{CIB}}$	$45^{+10}_{-10} \quad (-2.9\sigma)$	$z_{\text{re}}$	$9.96^{+3.0}_{-3.1} \quad (-0.4\sigma)$	$\sigma_8(0.57)$	$0.615^{+0.023}_{-0.021} \quad (-0.5\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.89 \quad (-1.0\sigma)$	$10^9 A_{\text{s}}$	$2.19^{+0.15}_{-0.14} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-7} \quad (-0.7\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.52^{+0.23}_{-0.22}$	$10^9 A_{\text{s}} e^{-2\tau}$	$1.873^{+0.026}_{-0.026} \quad (-0.8\sigma)$	$f_{2000}^{217}$	$105.8^{+4.6}_{-4.7} \quad (-0.2\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1229^{+30}_{-29} \quad (-0.5\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+5}_{-5} \quad (-0.8\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5712^{+73}_{-74} \quad (-0.5\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.5 \quad (\nu: 2.3) \quad (-0.4\sigma)$
$A_{100}^{\text{dust}}$	$0.99^{+0.39}_{-0.38}$	$D_{810}$	$2530^{+27}_{-27} \quad (-0.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$12952.7 \quad (\nu: 18.1)$
$A_{143}^{\text{dust}}$	$1.02^{+0.36}_{-0.36}$	$D_{1420}$	$815.1^{+9.5}_{-9.6} \quad (+0.1\sigma)$	$\chi_{6\text{DF}}^2$	$0.050 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{217}^{\text{dust}}$	$1.22^{+0.23}_{-0.23}$	$n_{\text{s}, 0.002}$	$0.969^{+0.014}_{-0.014} \quad (-0.0\sigma)$	$\chi_{\text{MGS}}^2$	$1.39 \quad (\nu: 0.1) \quad (+0.2\sigma)$
$A_{143 \times 217}^{\text{dust}}$	$0.98^{+0.35}_{-0.36}$	$Y_{\text{P}}$	$0.244^{+0.030}_{-0.032} \quad (-0.6\sigma)$	$\chi_{\text{DR11CMass}}^2$	$2.80 \quad (\nu: 0.1) \quad (-0.1\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	Age/Gyr	$13.794^{+0.069}_{-0.071} \quad (+0.1\sigma)$	$\chi_{\text{DR11LOWZ}}^2$	$0.68 \quad (\nu: 0.1) \quad (-0.2\sigma)$
$c_{217}$	$0.9970^{+0.0034}_{-0.0035} \quad (+0.7\sigma)$	$z_*$	$1089.8^{+1.0}_{-1.0} \quad (-0.8\sigma)$	$\chi_{\text{prior}}^2$	$9.1 \quad (\nu: 6.2) \quad (-1.9\sigma)$
$c_{\text{TE}}$	$1.0042^{+0.0092}_{-0.0093}$	$r_*$	$144.73^{+0.55}_{-0.56} \quad (+0.4\sigma)$	$\chi_{\text{CMB}}^2$	$23449.2 \quad (\nu: 17.6) \quad (+1571.1\sigma)$
$c_{\text{EE}}$	$1.001^{+0.010}_{-0.011}$	$100\theta_*$	$1.04106^{+0.00060}_{-0.00061} \quad (-0.1\sigma)$	$\chi_{\text{BAO}}^2$	$4.92 \quad (\nu: 0.3) \quad (-0.0\sigma)$

$$\bar{\chi}_{\text{eff}}^2 = 23463.20; \Delta\bar{\chi}_{\text{eff}}^2 = 10490.37; R - 1 = 0.00938$$

### 23.24 base\_yhe\_CamSpecHM\_TTTEEE\_lowTEB\_post\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00044}_{-0.00042} \quad (+0.2\sigma)$	$c_{EE}$	$1.001^{+0.011}_{-0.011}$	$r_*$	$144.71^{+0.61}_{-0.64} \quad (+0.4\sigma)$
$\Omega_c h^2$	$0.1189^{+0.0028}_{-0.0028} \quad (-0.4\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	$1.04105^{+0.00066}_{-0.00065} \quad (-0.0\sigma)$
$100\theta_{MC}$	$1.0408^{+0.0013}_{-0.0013} \quad (-0.3\sigma)$	$H_0$	$67.7^{+1.6}_{-1.5} \quad (+0.2\sigma)$	$z_{drag}$	$1059.8^{+1.8}_{-1.8} \quad (-0.2\sigma)$
$\tau$	$0.079^{+0.036}_{-0.035} \quad (-0.2\sigma)$	$\Omega_\Lambda$	$0.690^{+0.019}_{-0.019} \quad (+0.3\sigma)$	$r_{drag}$	$147.38^{+0.64}_{-0.66} \quad (+0.4\sigma)$
$Y_P$	$0.244^{+0.032}_{-0.033} \quad (-0.5\sigma)$	$\Omega_m$	$0.310^{+0.019}_{-0.019} \quad (-0.3\sigma)$	$k_D$	$0.1406^{+0.0011}_{-0.0011} \quad (+0.4\sigma)$
$\ln(10^{10} A_s)$	$3.088^{+0.071}_{-0.069} \quad (-0.4\sigma)$	$\Omega_m h^2$	$0.1419^{+0.0026}_{-0.0026} \quad (-0.4\sigma)$	$100\theta_D$	$0.1607^{+0.0012}_{-0.0013} \quad (-0.7\sigma)$
$n_s$	$0.968^{+0.017}_{-0.017} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.0961^{+0.0012}_{-0.0011} \quad (-0.2\sigma)$	$z_{eq}$	$3376^{+63}_{-61} \quad (-0.4\sigma)$
$y_{cal}$	$1.0003^{+0.0047}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8$	$0.826^{+0.030}_{-0.028} \quad (-0.5\sigma)$	$100\theta_{eq}$	$0.818^{+0.012}_{-0.012} \quad (+0.4\sigma)$
$A_{100}^{PS}$	$243^{+40}_{-50} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.019}_{-0.018} \quad (-0.7\sigma)$	$r_{drag}/D_V(0.57)$	$0.0717^{+0.0011}_{-0.0010} \quad (+0.3\sigma)$
$A_{143}^{PS}$	$38^{+20}_{-20} \quad (-0.8\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.616^{+0.021}_{-0.021} \quad (-0.7\sigma)$	$H(0.57)$	$93.06^{+0.82}_{-0.77} \quad (+0.1\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.004^{+0.034}_{-0.033} \quad (-0.6\sigma)$	$D_A(0.57)$	$1386^{+21}_{-22} \quad (-0.2\sigma)$
$A_{217}^{CIB}$	$45^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.481^{+0.076}_{-0.080} \quad (-0.6\sigma)$	$F_{AP}(0.57)$	$0.6756^{+0.0048}_{-0.0048} \quad (-0.3\sigma)$
$A_{143}^{tSZ}$	$< 6.88 \quad (-0.9\sigma)$	$z_{re}$	$9.9^{+3.3}_{-3.3} \quad (-0.3\sigma)$	$f\sigma_8(0.57)$	$0.480^{+0.016}_{-0.016} \quad (-0.6\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.22}$	$10^9 A_s$	$2.19^{+0.16}_{-0.15} \quad (-0.4\sigma)$	$\sigma_8(0.57)$	$0.615^{+0.024}_{-0.022} \quad (-0.4\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.873^{+0.026}_{-0.026} \quad (-0.8\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-7} \quad (-0.7\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1229^{+32}_{-32} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$105.8^{+4.6}_{-4.7} \quad (-0.2\sigma)$
$A_{100}^{dust}$	$0.99^{+0.39}_{-0.38}$	$D_{220}$	$5712^{+73}_{-75} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+5}_{-5} \quad (-0.8\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2530^{+26}_{-27} \quad (-0.5\sigma)$	$\chi_{lowTEB}^2$	$10496.6 \quad (\nu: 2.4) \quad (-0.4\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	$815.1^{+9.4}_{-9.6} \quad (+0.1\sigma)$	$\chi_{CamSpec}^2$	$12953.0 \quad (\nu: 18.7)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.968^{+0.017}_{-0.017} \quad (+0.1\sigma)$	$\chi_{JLA}^2$	$706.78 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.244^{+0.032}_{-0.033} \quad (-0.5\sigma)$	$\chi_{prior}^2$	$9.1 \quad (\nu: 6.2) \quad (-1.9\sigma)$
$c_{217}$	$0.9970^{+0.0034}_{-0.0035} \quad (+0.7\sigma)$	$Age/Gyr$	$13.795^{+0.082}_{-0.086} \quad (-0.0\sigma)$	$\chi_{CMB}^2$	$23449.6 \quad (\nu: 18.4) \quad (+1550.7\sigma)$
$c_{TE}$	$1.0042^{+0.0092}_{-0.0094}$	$z_*$	$1089.8^{+1.0}_{-1.0} \quad (-0.9\sigma)$		

$$\bar{\chi}_{eff}^2 = 24165.51; \Delta \bar{\chi}_{eff}^2 = 10490.44; R - 1 = 0.00815$$

### 23.25 base\_yhe\_CamSpecHM\_TTTEEE\_lowTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02233^{+0.00043}_{-0.00042} \quad (+0.2\sigma)$	$c_{EE}$	$1.001^{+0.011}_{-0.011}$	$r_*$	$144.79^{+0.59}_{-0.60} \quad (+0.3\sigma)$
$\Omega_c h^2$	$0.1188^{+0.0028}_{-0.0028} \quad (-0.3\sigma)$	$\beta_1^1$	$-0.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.04106^{+0.00065}_{-0.00066} \quad (-0.1\sigma)$
$100\theta_{MC}$	$1.0408^{+0.0013}_{-0.0013} \quad (-0.3\sigma)$	$H_0$	$67.7^{+1.6}_{-1.5} \quad (+0.2\sigma)$	$z_{drag}$	$1059.6^{+1.8}_{-1.8} \quad (-0.1\sigma)$
$\tau$	$0.065^{+0.028}_{-0.028} \quad (+0.1\sigma)$	$\Omega_\Lambda$	$0.691^{+0.019}_{-0.019} \quad (+0.2\sigma)$	$r_{drag}$	$147.47^{+0.61}_{-0.62} \quad (+0.2\sigma)$
$Y_P$	$0.241^{+0.032}_{-0.033} \quad (-0.4\sigma)$	$\Omega_m$	$0.309^{+0.019}_{-0.019} \quad (-0.2\sigma)$	$k_D$	$0.1406^{+0.0011}_{-0.0011} \quad (+0.4\sigma)$
$\ln(10^{10} A_s)$	$3.059^{+0.054}_{-0.054} \quad (-0.0\sigma)$	$\Omega_m h^2$	$0.1418^{+0.0026}_{-0.0026} \quad (-0.3\sigma)$	$100\theta_D$	$0.1607^{+0.0012}_{-0.0012} \quad (-0.7\sigma)$
$n_s$	$0.967^{+0.017}_{-0.017} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.0960^{+0.0011}_{-0.0011} \quad (-0.1\sigma)$	$z_{eq}$	$3372^{+63}_{-61} \quad (-0.3\sigma)$
$y_{cal}$	$1.0001^{+0.0048}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8$	$0.814^{+0.020}_{-0.019} \quad (-0.2\sigma)$	$100\theta_{eq}$	$0.819^{+0.012}_{-0.012} \quad (+0.3\sigma)$
$A_{100}^{PS}$	$244^{+40}_{-50} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.453^{+0.013}_{-0.013} \quad (-0.4\sigma)$	$r_{drag}/D_V(0.57)$	$0.0717^{+0.0011}_{-0.0010} \quad (+0.2\sigma)$
$A_{143}^{PS}$	$38^{+20}_{-20} \quad (-0.8\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.014}_{-0.014} \quad (-0.3\sigma)$	$H(0.57)$	$93.03^{+0.83}_{-0.78} \quad (+0.1\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$0.989^{+0.021}_{-0.021} \quad (-0.3\sigma)$	$D_A(0.57)$	$1386^{+21}_{-21} \quad (-0.2\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.447^{+0.051}_{-0.053} \quad (-0.3\sigma)$	$F_{AP}(0.57)$	$0.6755^{+0.0049}_{-0.0048} \quad (-0.2\sigma)$
$A_{143}^{tSZ}$	$< 6.81 \quad (-0.9\sigma)$	$z_{re}$	$8.7^{+2.5}_{-2.8} \quad (+0.1\sigma)$	$f\sigma_8(0.57)$	$0.473^{+0.011}_{-0.010} \quad (-0.3\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.23}_{-0.23}$	$10^9 A_s$	$2.13^{+0.12}_{-0.11} \quad (-0.0\sigma)$	$\sigma_8(0.57)$	$0.606^{+0.018}_{-0.017} \quad (-0.1\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.870^{+0.024}_{-0.025} \quad (-0.7\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-7} \quad (-0.7\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1225^{+31}_{-32} \quad (-0.4\sigma)$	$f_{2000}^{217}$	$105.9^{+4.6}_{-4.8} \quad (-0.2\sigma)$
$A_{100}^{dust}$	$0.99^{+0.39}_{-0.38}$	$D_{220}$	$5709^{+72}_{-76} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+5}_{-5} \quad (-0.8\sigma)$
$A_{143}^{dust}$	$1.03^{+0.36}_{-0.37}$	$D_{810}$	$2529^{+26}_{-27} \quad (-0.4\sigma)$	$\chi_{lensing}^2$	$9.9 \quad (\nu: 1.0) \quad (-0.3\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$D_{1420}$	$815.1^{+9.6}_{-9.6} \quad (+0.1\sigma)$	$\chi_{lowTEB}^2$	$10495.5 \quad (\nu: 1.2) \quad (-0.2\sigma)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.967^{+0.017}_{-0.017} \quad (+0.1\sigma)$	$\chi_{CamSpec}^2$	$12954.2 \quad (\nu: 18.5)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.241^{+0.032}_{-0.033} \quad (-0.4\sigma)$	$\chi_{prior}^2$	$9.2 \quad (\nu: 6.3) \quad (-1.8\sigma)$
$c_{217}$	$0.9971^{+0.0034}_{-0.0035} \quad (+0.7\sigma)$	$Age/Gyr$	$13.800^{+0.084}_{-0.086} \quad (-0.1\sigma)$	$\chi_{CMB}^2$	$23459.5 \quad (\nu: 18.9) \quad (+1554.2\sigma)$
$c_{TE}$	$1.0049^{+0.0092}_{-0.0092}$	$z_*$	$1089.7^{+1.0}_{-1.0} \quad (-0.7\sigma)$		

$$\bar{\chi}_{eff}^2 = 23468.77; \Delta \bar{\chi}_{eff}^2 = 10488.50; R - 1 = 0.01091$$

### 23.26 base\_yhe\_CamSpecHM\_TTTEEE\_lowTEB\_post\_H070p6

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00044}_{-0.00042} \quad (+0.2\sigma)$	$c_{EE}$	$1.001^{+0.011}_{-0.011}$	$r_*$	$144.72^{+0.62}_{-0.64} \quad (+0.5\sigma)$
$\Omega_c h^2$	$0.1188^{+0.0029}_{-0.0029} \quad (-0.4\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	$1.04106^{+0.00065}_{-0.00066} \quad (-0.0\sigma)$
$100\theta_{MC}$	$1.0409^{+0.0013}_{-0.0013} \quad (-0.3\sigma)$	$H_0$	$67.8^{+1.6}_{-1.5} \quad (+0.3\sigma)$	$z_{drag}$	$1059.9^{+1.8}_{-1.8} \quad (-0.2\sigma)$
$\tau$	$0.080^{+0.036}_{-0.035} \quad (-0.2\sigma)$	$\Omega_\Lambda$	$0.691^{+0.019}_{-0.020} \quad (+0.3\sigma)$	$r_{drag}$	$147.38^{+0.64}_{-0.66} \quad (+0.4\sigma)$
$Y_P$	$0.245^{+0.032}_{-0.033} \quad (-0.5\sigma)$	$\Omega_m$	$0.309^{+0.020}_{-0.019} \quad (-0.3\sigma)$	$k_D$	$0.1406^{+0.0011}_{-0.0011} \quad (+0.4\sigma)$
$\ln(10^{10} A_s)$	$3.089^{+0.071}_{-0.070} \quad (-0.4\sigma)$	$\Omega_m h^2$	$0.1419^{+0.0027}_{-0.0027} \quad (-0.4\sigma)$	$100\theta_D$	$0.1608^{+0.0012}_{-0.0012} \quad (-0.7\sigma)$
$n_s$	$0.969^{+0.017}_{-0.017} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.0961^{+0.0012}_{-0.0011} \quad (-0.2\sigma)$	$z_{eq}$	$3375^{+64}_{-63} \quad (-0.4\sigma)$
$y_{cal}$	$1.0003^{+0.0048}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8$	$0.827^{+0.030}_{-0.028} \quad (-0.5\sigma)$	$100\theta_{eq}$	$0.818^{+0.013}_{-0.012} \quad (+0.4\sigma)$
$A_{100}^{PS}$	$243^{+40}_{-50} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.460^{+0.019}_{-0.019} \quad (-0.7\sigma)$	$r_{drag}/D_V(0.57)$	$0.0717^{+0.0011}_{-0.0011} \quad (+0.3\sigma)$
$A_{143}^{PS}$	$38^{+20}_{-20} \quad (-0.8\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.616^{+0.021}_{-0.021} \quad (-0.7\sigma)$	$H(0.57)$	$93.09^{+0.83}_{-0.78} \quad (+0.1\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.004^{+0.034}_{-0.034} \quad (-0.6\sigma)$	$D_A(0.57)$	$1385^{+21}_{-22} \quad (-0.2\sigma)$
$A_{217}^{CIB}$	$45^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.481^{+0.076}_{-0.080} \quad (-0.6\sigma)$	$F_{AP}(0.57)$	$0.6754^{+0.0049}_{-0.0049} \quad (-0.3\sigma)$
$A_{143}^{tSZ}$	$< 6.87 \quad (-1.0\sigma)$	$z_{re}$	$10.0^{+3.3}_{-3.3} \quad (-0.3\sigma)$	$f\sigma_8(0.57)$	$0.480^{+0.016}_{-0.016} \quad (-0.6\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.22}$	$10^9 A_s$	$2.20^{+0.16}_{-0.15} \quad (-0.4\sigma)$	$\sigma_8(0.57)$	$0.616^{+0.024}_{-0.022} \quad (-0.4\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.873^{+0.026}_{-0.026} \quad (-0.8\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-7} \quad (-0.7\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1228^{+33}_{-32} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$105.8^{+4.6}_{-4.7} \quad (-0.2\sigma)$
$A_{100}^{dust}$	$0.99^{+0.39}_{-0.38}$	$D_{220}$	$5712^{+73}_{-75} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+5}_{-5} \quad (-0.8\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2530^{+26}_{-27} \quad (-0.4\sigma)$	$\chi_{lowTEB}^2$	$10496.6 \quad (\nu: 2.4) \quad (-0.4\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	$815.1^{+9.4}_{-9.6} \quad (+0.1\sigma)$	$\chi_{CamSpec}^2$	$12953.1 \quad (\nu: 18.9)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.969^{+0.017}_{-0.017} \quad (+0.1\sigma)$	$\chi_{H070p6}^2$	$0.78 \quad (\nu: 0.1) \quad (-0.2\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.245^{+0.032}_{-0.033} \quad (-0.5\sigma)$	$\chi_{prior}^2$	$9.1 \quad (\nu: 6.2) \quad (-1.9\sigma)$
$c_{217}$	$0.9970^{+0.0034}_{-0.0035} \quad (+0.7\sigma)$	$Age/Gyr$	$13.792^{+0.083}_{-0.087} \quad (-0.0\sigma)$	$\chi_{CMB}^2$	$23449.7 \quad (\nu: 18.5) \quad (+1548.8\sigma)$
$c_{TE}$	$1.0042^{+0.0092}_{-0.0093}$	$z_*$	$1089.8^{+1.0}_{-1.0} \quad (-0.8\sigma)$		

$$\bar{\chi}_{eff}^2 = 23459.55; \Delta \bar{\chi}_{eff}^2 = 10490.41; R - 1 = 0.00875$$

### 23.27 base\_yhe\_CamSpecHM\_TTTEEE\_lowTEB\_post\_lensing\_BAO\_H070p6\_JLA

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02237^{+0.00036}_{-0.00035} \quad (+0.2\sigma)$	$H_0$	$67.9^{+1.1}_{-1.0} \quad (+0.1\sigma)$	$k_D$	$0.14051^{+0.00092}_{-0.00090} \quad (+0.6\sigma)$
$\Omega_c h^2$	$0.1185^{+0.0020}_{-0.0020} \quad (-0.3\sigma)$	$\Omega_\Lambda$	$0.693^{+0.013}_{-0.013} \quad (+0.2\sigma)$	$100\theta_D$	$0.1607^{+0.0012}_{-0.0012} \quad (-0.7\sigma)$
$100\theta_{MC}$	$1.0409^{+0.0011}_{-0.0012} \quad (-0.4\sigma)$	$\Omega_m$	$0.307^{+0.013}_{-0.013} \quad (-0.2\sigma)$	$z_{eq}$	$3366^{+45}_{-44} \quad (-0.3\sigma)$
$\tau$	$0.068^{+0.024}_{-0.024} \quad (+0.1\sigma)$	$\Omega_m h^2$	$0.1415^{+0.0019}_{-0.0018} \quad (-0.3\sigma)$	$100\theta_{eq}$	$0.8198^{+0.0086}_{-0.0085} \quad (+0.2\sigma)$
$Y_P$	$0.244^{+0.030}_{-0.031} \quad (-0.4\sigma)$	$\Omega_m h^3$	$0.0960^{+0.0011}_{-0.0011} \quad (-0.1\sigma)$	$r_{drag}/D_V(0.57)$	$0.07181^{+0.00074}_{-0.00071} \quad (+0.2\sigma)$
$\ln(10^{10} A_s)$	$3.063^{+0.047}_{-0.045} \quad (-0.1\sigma)$	$\sigma_8$	$0.815^{+0.019}_{-0.019} \quad (-0.2\sigma)$	$H(0.57)$	$93.12^{+0.60}_{-0.59} \quad (+0.0\sigma)$
$n_s$	$0.969^{+0.014}_{-0.014} \quad (+0.1\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.452^{+0.012}_{-0.012} \quad (-0.3\sigma)$	$D_A(0.57)$	$1384^{+15}_{-15} \quad (-0.1\sigma)$
$y_{cal}$	$1.0001^{+0.0049}_{-0.0049} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.607^{+0.014}_{-0.014} \quad (-0.3\sigma)$	$F_{AP}(0.57)$	$0.6749^{+0.0033}_{-0.0033} \quad (-0.2\sigma)$
$A_{100}^{PS}$	$244^{+50}_{-50} \quad (-0.7\sigma)$	$\sigma_8/h^{0.5}$	$0.989^{+0.021}_{-0.021} \quad (-0.3\sigma)$	$f\sigma_8(0.57)$	$0.473^{+0.010}_{-0.010} \quad (-0.3\sigma)$
$A_{143}^{PS}$	$38^{+20}_{-20} \quad (-0.8\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.050}_{-0.052} \quad (-0.3\sigma)$	$\sigma_8(0.57)$	$0.607^{+0.016}_{-0.015} \quad (-0.2\sigma)$
$A_{217}^{PS}$	$98^{+30}_{-30} \quad (+0.1\sigma)$	$z_{re}$	$8.9^{+2.2}_{-2.4} \quad (+0.0\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-7} \quad (-0.7\sigma)$
$A_{217}^{CIB}$	$46^{+10}_{-10} \quad (-2.9\sigma)$	$10^9 A_s$	$2.14^{+0.10}_{-0.096} \quad (-0.1\sigma)$	$f_{2000}^{217}$	$106.0^{+4.6}_{-4.8} \quad (-0.2\sigma)$
$A_{143}^{tSZ}$	$< 6.80 \quad (-0.9\sigma)$	$10^9 A_s e^{-2\tau}$	$1.869^{+0.024}_{-0.025} \quad (-0.7\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+5}_{-5} \quad (-0.7\sigma)$
$r_{143 \times 217}^{PS}$	$0.51^{+0.23}_{-0.22}$	$D_{40}$	$1222^{+28}_{-28} \quad (-0.4\sigma)$	$\chi^2_{lensing}$	$9.8 \quad (\nu: 1.0) \quad (-0.3\sigma)$
$\xi^{tSZ \times CIB}$	—	$D_{220}$	$5710^{+72}_{-75} \quad (-0.4\sigma)$	$\chi^2_{lowTEB}$	$10495.1 \quad (\nu: 0.9) \quad (-0.2\sigma)$
$A^{kSZ}$	—	$D_{810}$	$2529^{+26}_{-27} \quad (-0.4\sigma)$	$\chi^2_{CamSpec}$	$12954.0 \quad (\nu: 17.7)$
$A_{100}^{dust}$	$0.99^{+0.39}_{-0.38}$	$D_{1420}$	$815.0^{+9.7}_{-9.6} \quad (+0.1\sigma)$	$\chi^2_{H070p6}$	$0.70 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{143}^{dust}$	$1.03^{+0.36}_{-0.37}$	$n_{s,0.002}$	$0.969^{+0.014}_{-0.014} \quad (+0.1\sigma)$	$\chi^2_{JLA}$	$706.67 \quad (\nu: 0.0) \quad (-0.2\sigma)$
$A_{217}^{dust}$	$1.21^{+0.23}_{-0.23}$	$Y_P$	$0.244^{+0.030}_{-0.031} \quad (-0.4\sigma)$	$\chi^2_{6DF}$	$0.035 \quad (\nu: 0.0) \quad (-0.1\sigma)$
$A_{143 \times 217}^{dust}$	$0.99^{+0.35}_{-0.36}$	$Age/Gyr$	$13.792^{+0.067}_{-0.068} \quad (+0.0\sigma)$	$\chi^2_{MGS}$	$1.54 \quad (\nu: 0.1) \quad (+0.2\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.9\sigma)$	$z_*$	$1089.7^{+1.0}_{-1.0} \quad (-0.7\sigma)$	$\chi^2_{DR11CMass}$	$2.74 \quad (\nu: 0.1) \quad (+0.0\sigma)$
$c_{217}$	$0.9971^{+0.0035}_{-0.0035} \quad (+0.8\sigma)$	$r_*$	$144.83^{+0.53}_{-0.53} \quad (+0.3\sigma)$	$\chi^2_{DR11LOWZ}$	$0.52 \quad (\nu: 0.1) \quad (-0.2\sigma)$
$c_{TE}$	$1.0050^{+0.0092}_{-0.0092}$	$100\theta_*$	$1.04111^{+0.00058}_{-0.00061} \quad (-0.1\sigma)$	$\chi^2_{prior}$	$9.2 \quad (\nu: 6.4) \quad (-1.9\sigma)$
$c_{EE}$	$1.001^{+0.010}_{-0.011}$	$z_{drag}$	$1059.8^{+1.6}_{-1.6} \quad (-0.2\sigma)$	$\chi^2_{CMB}$	$23459.0 \quad (\nu: 17.8) \quad (+1580.8\sigma)$
$\beta_1^1$	$-0.1^{+1.9}_{-2.0}$	$r_{drag}$	$147.50^{+0.56}_{-0.58} \quad (+0.2\sigma)$	$\chi^2_{BAO}$	$4.84 \quad (\nu: 0.2) \quad (+0.0\sigma)$

$$\bar{\chi}^2_{eff} = 24180.41; \Delta\bar{\chi}^2_{eff} = 10488.26; R - 1 = 0.01141$$

### 23.28 base\_yhe\_CamSpecHM\_TTTEEE\_lowTEB\_post\_zre6p5

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02236^{+0.00045}_{-0.00042} \quad (+0.2\sigma)$	$c_{EE}$	$1.001^{+0.011}_{-0.011}$	$r_*$	$144.69^{+0.63}_{-0.64} \quad (+0.5\sigma)$
$\Omega_c h^2$	$0.1191^{+0.0029}_{-0.0029} \quad (-0.4\sigma)$	$\beta_1^1$	$-0.1^{+2.0}_{-2.0}$	$100\theta_*$	$1.04102^{+0.00067}_{-0.00065} \quad (-0.0\sigma)$
$100\theta_{MC}$	$1.0408^{+0.0014}_{-0.0013} \quad (-0.3\sigma)$	$H_0$	$67.6^{+1.6}_{-1.5} \quad (+0.3\sigma)$	$z_{drag}$	$1059.8^{+1.8}_{-1.8} \quad (-0.2\sigma)$
$\tau$	$0.079^{+0.032}_{-0.033} \quad (-0.2\sigma)$	$\Omega_\Lambda$	$0.689^{+0.019}_{-0.020} \quad (+0.3\sigma)$	$r_{drag}$	$147.36^{+0.65}_{-0.66} \quad (+0.4\sigma)$
$Y_P$	$0.243^{+0.032}_{-0.034} \quad (-0.5\sigma)$	$\Omega_m$	$0.311^{+0.020}_{-0.019} \quad (-0.3\sigma)$	$k_D$	$0.1407^{+0.0011}_{-0.0011} \quad (+0.4\sigma)$
$\ln(10^{10} A_s)$	$3.088^{+0.067}_{-0.066} \quad (-0.4\sigma)$	$\Omega_m h^2$	$0.1421^{+0.0027}_{-0.0026} \quad (-0.4\sigma)$	$100\theta_D$	$0.1607^{+0.0012}_{-0.0013} \quad (-0.8\sigma)$
$n_s$	$0.968^{+0.017}_{-0.017} \quad (+0.1\sigma)$	$\Omega_m h^3$	$0.0961^{+0.0012}_{-0.0011} \quad (-0.2\sigma)$	$z_{eq}$	$3380^{+64}_{-63} \quad (-0.4\sigma)$
$y_{cal}$	$1.0003^{+0.0047}_{-0.0049} \quad (-0.1\sigma)$	$\sigma_8$	$0.827^{+0.028}_{-0.028} \quad (-0.5\sigma)$	$100\theta_{eq}$	$0.817^{+0.013}_{-0.012} \quad (+0.4\sigma)$
$A_{100}^{PS}$	$243^{+40}_{-50} \quad (-0.7\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.461^{+0.019}_{-0.018} \quad (-0.7\sigma)$	$r_{drag}/D_V(0.57)$	$0.0716^{+0.0011}_{-0.0011} \quad (+0.3\sigma)$
$A_{143}^{PS}$	$38^{+20}_{-20} \quad (-0.8\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.617^{+0.021}_{-0.020} \quad (-0.7\sigma)$	$H(0.57)$	$93.02^{+0.84}_{-0.77} \quad (+0.1\sigma)$
$A_{217}^{PS}$	$99^{+30}_{-30} \quad (+0.1\sigma)$	$\sigma_8/h^{0.5}$	$1.005^{+0.033}_{-0.033} \quad (-0.6\sigma)$	$D_A(0.57)$	$1387^{+21}_{-22} \quad (-0.2\sigma)$
$A_{217}^{CIB}$	$45^{+10}_{-10} \quad (-2.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.484^{+0.076}_{-0.074} \quad (-0.6\sigma)$	$F_{AP}(0.57)$	$0.6758^{+0.0050}_{-0.0050} \quad (-0.3\sigma)$
$A_{143}^{tSZ}$	$< 6.89 \quad (-0.9\sigma)$	$z_{re}$	$9.9^{+2.8}_{-3.1} \quad (-0.2\sigma)$	$f\sigma_8(0.57)$	$0.480^{+0.016}_{-0.016} \quad (-0.6\sigma)$
$r_{143 \times 217}^{PS}$	$0.52^{+0.23}_{-0.22}$	$10^9 A_s$	$2.19^{+0.15}_{-0.14} \quad (-0.4\sigma)$	$\sigma_8(0.57)$	$0.615^{+0.023}_{-0.022} \quad (-0.4\sigma)$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.873^{+0.026}_{-0.026} \quad (-0.9\sigma)$	$f_{2000}^{143}$	$28^{+6}_{-7} \quad (-0.7\sigma)$
$A^{kSZ}$	—	$D_{40}$	$1230^{+33}_{-32} \quad (-0.5\sigma)$	$f_{2000}^{217}$	$105.7^{+4.6}_{-4.7} \quad (-0.2\sigma)$
$A_{100}^{dust}$	$0.99^{+0.39}_{-0.38}$	$D_{220}$	$5711^{+73}_{-74} \quad (-0.4\sigma)$	$f_{2000}^{143 \times 217}$	$31^{+5}_{-5} \quad (-0.8\sigma)$
$A_{143}^{dust}$	$1.02^{+0.36}_{-0.36}$	$D_{810}$	$2530^{+26}_{-27} \quad (-0.5\sigma)$	$\chi_{lowTEB}^2$	$10496.7 \quad (\nu: 2.4) \quad (-0.4\sigma)$
$A_{217}^{dust}$	$1.22^{+0.23}_{-0.23}$	$D_{1420}$	$815.1^{+9.4}_{-9.6} \quad (+0.2\sigma)$	$\chi_{CamSpec}^2$	$12952.9 \quad (\nu: 18.4)$
$A_{143 \times 217}^{dust}$	$0.98^{+0.35}_{-0.35}$	$n_{s,0.002}$	$0.968^{+0.017}_{-0.017} \quad (+0.1\sigma)$	$\chi_{prior}^2$	$9.1 \quad (\nu: 6.2) \quad (-1.9\sigma)$
$c_{100}$	$0.9968^{+0.0019}_{-0.0019} \quad (-1.8\sigma)$	$Y_P$	$0.243^{+0.032}_{-0.034} \quad (-0.5\sigma)$	$\chi_{CMB}^2$	$23449.6 \quad (\nu: 18.2) \quad (+1548.1\sigma)$
$c_{217}$	$0.9970^{+0.0034}_{-0.0035} \quad (+0.7\sigma)$	Age/Gyr	$13.799^{+0.082}_{-0.087} \quad (-0.0\sigma)$		
$c_{TE}$	$1.0040^{+0.0092}_{-0.0093}$	$z_*$	$1089.8^{+1.0}_{-1.0} \quad (-0.9\sigma)$		

$$\bar{\chi}_{eff}^2 = 23458.67; \Delta \bar{\chi}_{eff}^2 = 10490.45; R - 1 = 0.00765$$

### 23.29 base\_yhe\_plikHM\_TE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02240	$0.02239^{+0.00063}_{-0.00062}$	$\sigma_8$	0.8071	$0.807^{+0.040}_{-0.040}$	$D_A/\text{Gpc}$	13.925	$13.93^{+0.10}_{-0.10}$
$\Omega_c h^2$	0.11772	$0.1177^{+0.0040}_{-0.0039}$	$\sigma_8 \Omega_m^{0.5}$	0.4437	$0.444^{+0.031}_{-0.030}$	$z_{\text{drag}}$	1059.93	$1059.8^{+4.0}_{-3.9}$
$100\theta_{\text{MC}}$	1.04111	$1.0410^{+0.0033}_{-0.0034}$	$\sigma_8 \Omega_m^{0.25}$	0.5984	$0.599^{+0.033}_{-0.031}$	$r_{\text{drag}}$	147.66	$147.7^{+1.1}_{-1.1}$
$\tau$	0.0606	$0.061^{+0.042}_{-0.040}$	$\sigma_8/h^{0.5}$	0.9769	$0.978^{+0.051}_{-0.047}$	$k_D$	0.14020	$0.1404^{+0.0029}_{-0.0028}$
$Y_P$	0.248	$0.242^{+0.084}_{-0.095}$	$\langle d^2 \rangle^{1/2}$	2.405	$2.41^{+0.12}_{-0.11}$	$100\theta_D$	0.16091	$0.1607^{+0.0037}_{-0.0038}$
$\ln(10^{10} A_s)$	3.046	$3.047^{+0.090}_{-0.085}$	$z_{\text{re}}$	8.28	$8.2^{+3.9}_{-4.4}$	$z_{\text{eq}}$	3348	$3349^{+88}_{-88}$
$n_s$	0.9743	$0.974^{+0.030}_{-0.028}$	$10^9 A_s$	2.103	$2.11^{+0.19}_{-0.19}$	$k_{\text{eq}}$	0.010220	$0.01022^{+0.00027}_{-0.00027}$
$y_{\text{cal}}$	1.00003	$1.0002^{+0.0048}_{-0.0049}$	$10^9 A_s e^{-2\tau}$	1.8630	$1.864^{+0.036}_{-0.036}$	$100\theta_{\text{eq}}$	0.8233	$0.823^{+0.018}_{-0.017}$
$A_{100}^{\text{dustTE}}$	0.135	$0.137^{+0.075}_{-0.075}$	$D_{40}$	1203	$1205^{+63}_{-61}$	$100\theta_{s,\text{eq}}$	0.4546	$0.4545^{+0.0091}_{-0.0090}$
$A_{100 \times 143}^{\text{dustTE}}$	0.133	$0.133^{+0.058}_{-0.057}$	$D_{220}$	5680	$5682^{+130}_{-130}$	$r_{\text{drag}}/D_V(0.57)$	0.07210	$0.0721^{+0.0016}_{-0.0016}$
$A_{100 \times 217}^{\text{dustTE}}$	0.299	$0.30^{+0.17}_{-0.16}$	$D_{810}$	2524	$2528^{+67}_{-65}$	$H(0.57)$	93.27	$93.2^{+1.4}_{-1.4}$
$A_{143}^{\text{dustTE}}$	0.155	$0.15^{+0.11}_{-0.10}$	$D_{1420}$	814.6	$817^{+42}_{-41}$	$D_A(0.57)$	1379.1	$1380^{+34}_{-34}$
$A_{143 \times 217}^{\text{dustTE}}$	0.335	$0.34^{+0.16}_{-0.16}$	$D_{2000}$	230.2	$232^{+20}_{-19}$	$F_{\text{AP}}(0.57)$	0.6737	$0.6738^{+0.0072}_{-0.0068}$
$A_{217}^{\text{dustTE}}$	1.64	$1.65^{+0.50}_{-0.50}$	$n_{s,0.002}$	0.9743	$0.974^{+0.030}_{-0.028}$	$f\sigma_8(0.57)$	0.4668	$0.467^{+0.025}_{-0.023}$
$c_{100}$	0.99921	$0.9992^{+0.0020}_{-0.0019}$	$Y_P$	0.248	$0.242^{+0.084}_{-0.095}$	$\sigma_8(0.57)$	0.6026	$0.603^{+0.030}_{-0.030}$
$H_0$	68.25	$68.2^{+2.4}_{-2.4}$	$Y_P^{\text{BBN}}$	0.249	$0.243^{+0.084}_{-0.095}$	$\chi^2_{\text{lowTEB}}$	10493.28	$10494.8 (\nu: 3.2)$
$\Omega_\Lambda$	0.6978	$0.697^{+0.026}_{-0.028}$	Age/Gyr	13.779	$13.78^{+0.16}_{-0.16}$	$\chi^2_{\text{plikTE}}$	932.1	$939.4 (\nu: 10.1)$
$\Omega_m$	0.3022	$0.303^{+0.028}_{-0.026}$	$z_*$	1089.77	$1089.6^{+3.1}_{-3.1}$	$\chi^2_{\text{prior}}$	1.8	$7.9 (\nu: 6.7)$
$\Omega_m h^2$	0.14076	$0.1408^{+0.0037}_{-0.0037}$	$r_*$	144.99	$145.0^{+1.0}_{-1.0}$	$\chi^2_{\text{CMB}}$	11425.4	$11434.2 (\nu: 9.6)$
$\Omega_m h^3$	0.09607	$0.0960^{+0.0024}_{-0.0024}$	$100\theta_*$	1.04123	$1.0412^{+0.0013}_{-0.0014}$			

Best-fit  $\chi^2_{\text{eff}} = 11427.17$ ;  $\bar{\chi}^2_{\text{eff}} = 11442.04$ ;  $R - 1 = 0.00935$

$\chi^2_{\text{eff}}$ : CMB - lowL\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10493.28 plik\_dx11dr2\_HM\_v18\_TE: 932.07

### 23.30 base\_yhe\_plikHM\_EE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02454	$0.0245^{+0.0028}_{-0.0027}$	$\sigma_8 \Omega_m^{0.5}$	0.416	$0.415^{+0.066}_{-0.063}$	$z_{\text{drag}}$	1066.0	$1065.6^{+7.8}_{-7.9}$
$\Omega_c h^2$	0.1133	$0.1131^{+0.0097}_{-0.0095}$	$\sigma_8 \Omega_m^{0.25}$	0.579	$0.577^{+0.063}_{-0.061}$	$r_{\text{drag}}$	146.34	$146.5^{+2.5}_{-2.4}$
$100\theta_{\text{MC}}$	1.04184	$1.0417^{+0.0047}_{-0.0046}$	$\sigma_8/h^{0.5}$	0.948	$0.946^{+0.092}_{-0.089}$	$k_{\text{D}}$	0.14112	$0.1413^{+0.0034}_{-0.0033}$
$\tau$	0.0704	$0.070^{+0.046}_{-0.043}$	$\langle d^2 \rangle^{1/2}$	2.346	$2.34^{+0.17}_{-0.15}$	$100\theta_{\text{D}}$	0.1605	$0.1602^{+0.0052}_{-0.0051}$
$Y_{\text{P}}$	0.295	$0.28^{+0.12}_{-0.12}$	$z_{\text{re}}$	8.85	$8.6^{+4.1}_{-4.4}$	$z_{\text{eq}}$	3294	$3288^{+190}_{-180}$
$\ln(10^{10} A_{\text{s}})$	3.084	$3.083^{+0.098}_{-0.092}$	$10^9 A_{\text{s}}$	2.185	$2.18^{+0.21}_{-0.21}$	$k_{\text{eq}}$	0.01005	$0.01004^{+0.00059}_{-0.00054}$
$n_{\text{s}}$	0.9969	$0.997^{+0.037}_{-0.035}$	$10^9 A_{\text{s}} e^{-2\tau}$	1.898	$1.898^{+0.052}_{-0.052}$	$100\theta_{\text{eq}}$	0.8401	$0.842^{+0.039}_{-0.040}$
$y_{\text{cal}}$	0.99985	$0.99998^{+0.0049}_{-0.0049}$	$D_{40}$	1201	$1203^{+76}_{-73}$	$100\theta_{\text{s,eq}}$	0.4617	$0.462^{+0.019}_{-0.020}$
$A_{100}^{\text{dustEE}}$	0.0826	$0.083^{+0.012}_{-0.012}$	$D_{220}$	5950	$5958^{+420}_{-410}$	$r_{\text{drag}}/D_{\text{V}}(0.57)$	0.07395	$0.0741^{+0.0036}_{-0.0036}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0498	$0.050^{+0.010}_{-0.011}$	$D_{810}$	2566	$2570^{+100}_{-100}$	$H(0.57)$	95.65	$95.7^{+3.8}_{-3.5}$
$A_{100 \times 217}^{\text{dustEE}}$	0.0998	$0.099^{+0.064}_{-0.064}$	$D_{1420}$	827	$831^{+60}_{-59}$	$D_{\text{A}}(0.57)$	1327	$1327^{+82}_{-76}$
$A_{143}^{\text{dustEE}}$	0.1008	$0.101^{+0.014}_{-0.014}$	$D_{2000}$	232.9	$235^{+30}_{-30}$	$F_{\text{AP}}(0.57)$	0.6646	$0.665^{+0.016}_{-0.015}$
$A_{143 \times 217}^{\text{dustEE}}$	0.224	$0.224^{+0.093}_{-0.089}$	$n_{\text{s},0.002}$	0.9969	$0.997^{+0.037}_{-0.035}$	$f\sigma_8(0.57)$	0.4551	$0.453^{+0.044}_{-0.042}$
$A_{217}^{\text{dustEE}}$	0.654	$0.65^{+0.26}_{-0.26}$	$Y_{\text{P}}$	0.295	$0.28^{+0.12}_{-0.12}$	$\sigma_8(0.57)$	0.6094	$0.608^{+0.038}_{-0.037}$
$H_0$	71.9	$72.0^{+5.8}_{-5.9}$	$Y_{\text{P}}^{\text{BBN}}$	0.296	$0.29^{+0.12}_{-0.12}$	$\chi_{\text{lowTEB}}^2$	10492.43	$10494.2 (\nu: 2.7)$
$\Omega_{\Lambda}$	0.732	$0.732^{+0.055}_{-0.059}$	Age/Gyr	13.522	$13.53^{+0.37}_{-0.37}$	$\chi_{\text{plikEE}}^2$	751.8	$759.7 (\nu: 10.8)$
$\Omega_{\text{m}}$	0.268	$0.268^{+0.059}_{-0.055}$	$z_*$	1088.8	$1088.6^{+5.3}_{-4.9}$	$\chi_{\text{prior}}^2$	4.0	$8.3 (\nu: 6.4)$
$\Omega_{\text{m}} h^2$	0.1385	$0.1382^{+0.0081}_{-0.0074}$	$r_*$	144.34	$144.4^{+2.2}_{-2.1}$	$\chi_{\text{CMB}}^2$	11244.2	$11254.0 (\nu: 11.8)$
$\Omega_{\text{m}} h^3$	0.0996	$0.0995^{+0.0058}_{-0.0055}$	$100\theta_*$	1.04059	$1.0406^{+0.0022}_{-0.0021}$			
$\sigma_8$	0.804	$0.802^{+0.057}_{-0.053}$	$D_{\text{A}}/\text{Gpc}$	13.871	$13.88^{+0.22}_{-0.21}$			

Best-fit  $\chi_{\text{eff}}^2 = 11248.14$ ;  $\bar{\chi}_{\text{eff}}^2 = 11262.26$ ;  $R - 1 = 0.00801$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10492.43 plik\_dx11dr2\_HM\_v18\_EE: 751.75



### 23.31 base\_yhe\_CamSpecHM\_TE\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02254	$0.02259^{+0.00065}_{-0.00065}$ (+0.6 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.5909	$0.592^{+0.033}_{-0.032}$ (−0.5 $\sigma$ )	$z_{\text{drag}}$	1061.04	$1061.3^{+4.0}_{-3.9}$ (+0.8 $\sigma$ )
$\Omega_c h^2$	0.11602	$0.1159^{+0.0040}_{-0.0038}$ (−0.9 $\sigma$ )	$\sigma_8/h^{0.5}$	0.967	$0.968^{+0.051}_{-0.050}$ (−0.4 $\sigma$ )	$r_{\text{drag}}$	147.87	$147.8^{+1.1}_{-1.1}$ (+0.3 $\sigma$ )
$100\theta_{\text{MC}}$	1.04238	$1.0426^{+0.0034}_{-0.0033}$ (+0.9 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.356	$2.35^{+0.12}_{-0.12}$ (−0.9 $\sigma$ )	$k_{\text{D}}$	0.13896	$0.1389^{+0.0029}_{-0.0028}$ (−1.0 $\sigma$ )
$\tau$	0.0650	$0.066^{+0.042}_{-0.044}$ (+0.3 $\sigma$ )	$z_{\text{re}}$	8.78	$8.7^{+4.2}_{-4.5}$ (+0.3 $\sigma$ )	$100\theta_{\text{D}}$	0.16217	$0.1623^{+0.0037}_{-0.0037}$ (+0.8 $\sigma$ )
$Y_{\text{P}}$	0.275	$0.277^{+0.078}_{-0.087}$ (+0.8 $\sigma$ )	$10^9 A_{\text{s}}$	2.102	$2.11^{+0.20}_{-0.19}$ (+0.1 $\sigma$ )	$z_{\text{eq}}$	3311	$3310^{+90}_{-86}$ (−0.9 $\sigma$ )
$\ln(10^{10} A_{\text{s}})$	3.046	$3.049^{+0.092}_{-0.093}$ (+0.1 $\sigma$ )	$10^9 A_{\text{s}} e^{-2\tau}$	1.846	$1.849^{+0.052}_{-0.052}$ (−0.8 $\sigma$ )	$100\theta_{\text{eq}}$	0.8316	$0.832^{+0.018}_{-0.018}$ (+1.0 $\sigma$ )
$n_{\text{s}}$	0.9883	$0.991^{+0.030}_{-0.030}$ (+1.1 $\sigma$ )	$D_{40}$	1165	$1164^{+65}_{-61}$ (−1.3 $\sigma$ )	$r_{\text{drag}}/D_{\text{V}}(0.57)$	0.07293	$0.0730^{+0.0017}_{-0.0017}$ (+1.2 $\sigma$ )
$y_{\text{cal}}$	1.0001	$0.9999^{+0.0051}_{-0.0049}$ (−0.1 $\sigma$ )	$D_{220}$	5603	$5604^{+170}_{-160}$ (−1.2 $\sigma$ )	$H(0.57)$	93.89	$94.0^{+1.5}_{-1.4}$ (+1.1 $\sigma$ )
$c_{\text{TE}}$	0.9978	$0.999^{+0.019}_{-0.020}$	$D_{810}$	2497	$2500^{+81}_{-80}$ (−0.8 $\sigma$ )	$D_{\text{A}}(0.57)$	1363.1	$1361^{+35}_{-35}$ (−1.1 $\sigma$ )
$H_0$	69.41	$69.6^{+2.5}_{-2.5}$ (+1.1 $\sigma$ )	$D_{1420}$	801.9	$803^{+42}_{-41}$ (−0.7 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6702	$0.6699^{+0.0071}_{-0.0068}$ (−1.1 $\sigma$ )
$\Omega_{\Lambda}$	0.7110	$0.712^{+0.025}_{-0.028}$ (+1.1 $\sigma$ )	$n_{\text{s},0.002}$	0.9883	$0.991^{+0.030}_{-0.030}$ (+1.1 $\sigma$ )	$f\sigma_8(0.57)$	0.4626	$0.463^{+0.025}_{-0.024}$ (−0.3 $\sigma$ )
$\Omega_{\text{m}}$	0.2890	$0.288^{+0.028}_{-0.025}$ (−1.1 $\sigma$ )	$Y_{\text{P}}$	0.275	$0.277^{+0.078}_{-0.087}$ (+0.8 $\sigma$ )	$\sigma_8(0.57)$	0.6052	$0.607^{+0.032}_{-0.031}$ (+0.3 $\sigma$ )
$\Omega_{\text{m}} h^2$	0.13921	$0.1391^{+0.0038}_{-0.0036}$ (−0.9 $\sigma$ )	Age/Gyr	13.719	$13.71^{+0.16}_{-0.16}$ (−0.9 $\sigma$ )	$\chi^2_{\text{lowTEB}}$	10491.61	10493.1 ( $\nu$ : 1.3) (−0.7 $\sigma$ )
$\Omega_{\text{m}} h^3$	0.09662	$0.0968^{+0.0024}_{-0.0023}$ (+0.7 $\sigma$ )	$z_*$	1090.58	$1090.7^{+3.1}_{-3.0}$ (+0.7 $\sigma$ )	$\chi^2_{\text{CamSpec}}$	2694.5	2700.0 ( $\nu$ : 5.4)
$\sigma_8$	0.8060	$0.808^{+0.042}_{-0.040}$ (+0.0 $\sigma$ )	$r_*$	145.23	$145.2^{+1.0}_{-1.0}$ (+0.4 $\sigma$ )	$\chi^2_{\text{prior}}$	10.03	12.1 ( $\nu$ : 2.0) (+1.1 $\sigma$ )
$\sigma_8 \Omega_{\text{m}}^{0.5}$	0.4333	$0.433^{+0.030}_{-0.029}$ (−0.7 $\sigma$ )	$100\theta_*$	1.04177	$1.0419^{+0.0013}_{-0.0013}$ (+1.0 $\sigma$ )	$\chi^2_{\text{CMB}}$	13186.1	13193.1 ( $\nu$ : 7.0) (+402.2 $\sigma$ )

Best-fit  $\chi^2_{\text{eff}} = 13196.12$ ;  $\Delta\chi^2_{\text{eff}} = 1768.95$ ;  $\bar{\chi}^2_{\text{eff}} = 13205.16$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 1763.11$ ;  $R - 1 = 0.00900$

$\chi^2_{\text{eff}}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10491.61 ( $\Delta$  -1.67) CamSpec like\_v9.10CMH\_unified: 2694.49

### 23.32 base\_yhe\_CamSpecHM\_EE\_lowTEB

Parameter	Best fit	95% limits		Parameter	Best fit	95% limits		Parameter	Best fit	95% limits	
$\Omega_b h^2$	0.02473	$0.0248^{+0.0023}_{-0.0023}$	(+0.2 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.585	$0.583^{+0.053}_{-0.050}$	(+0.2 $\sigma$ )	$z_{\text{drag}}$	1066.9	$1066.7^{+6.6}_{-6.8}$	(+0.3 $\sigma$ )
$\Omega_c h^2$	0.1153	$0.1151^{+0.0078}_{-0.0074}$	(+0.4 $\sigma$ )	$\sigma_8/h^{0.5}$	0.955	$0.952^{+0.078}_{-0.074}$	(+0.1 $\sigma$ )	$r_{\text{drag}}$	145.57	$145.7^{+1.9}_{-1.9}$	(−0.7 $\sigma$ )
$100\theta_{\text{MC}}$	1.04208	$1.0419^{+0.0038}_{-0.0039}$	(+0.1 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.367	$2.37^{+0.15}_{-0.15}$	(+0.3 $\sigma$ )	$k_{\text{D}}$	0.14158	$0.1417^{+0.0028}_{-0.0026}$	(+0.2 $\sigma$ )
$\tau$	0.0664	$0.066^{+0.045}_{-0.042}$	(−0.1 $\sigma$ )	$z_{\text{re}}$	8.54	$8.4^{+4.0}_{-4.4}$	(−0.1 $\sigma$ )	$100\theta_{\text{D}}$	0.16075	$0.1606^{+0.0040}_{-0.0041}$	(+0.1 $\sigma$ )
$Y_{\text{P}}$	0.306	$0.299^{+0.095}_{-0.098}$	(+0.3 $\sigma$ )	$10^9 A_{\text{s}}$	2.168	$2.17^{+0.21}_{-0.20}$	(−0.2 $\sigma$ )	$z_{\text{eq}}$	3347	$3341^{+150}_{-140}$	(+0.6 $\sigma$ )
$\ln(10^{10} A_{\text{s}})$	3.077	$3.075^{+0.095}_{-0.090}$	(−0.2 $\sigma$ )	$10^9 A_{\text{s}} e^{-2\tau}$	1.899	$1.896^{+0.055}_{-0.055}$	(−0.1 $\sigma$ )	$100\theta_{\text{eq}}$	0.8309	$0.832^{+0.031}_{-0.031}$	(−0.5 $\sigma$ )
$n_{\text{s}}$	0.9908	$0.990^{+0.033}_{-0.033}$	(−0.4 $\sigma$ )	$D_{40}$	1211	$1213^{+72}_{-65}$	(+0.3 $\sigma$ )	$r_{\text{drag}}/D_{\text{V}}(0.57)$	0.07336	$0.0735^{+0.0030}_{-0.0029}$	(−0.3 $\sigma$ )
$y_{\text{cal}}$	1.0002	$1.0000^{+0.0051}_{-0.0050}$	(+0.0 $\sigma$ )	$D_{220}$	5950	$5955^{+360}_{-330}$	(−0.0 $\sigma$ )	$H(0.57)$	95.61	$95.7^{+3.2}_{-3.0}$	(−0.0 $\sigma$ )
$c_{\text{EE}}$	0.9983	$0.998^{+0.019}_{-0.019}$		$D_{810}$	2547	$2547^{+91}_{-89}$	(−0.5 $\sigma$ )	$D_{\text{A}}(0.57)$	1332	$1331^{+68}_{-65}$	(+0.1 $\sigma$ )
$H_0$	71.42	$71.5^{+4.9}_{-4.9}$	(−0.2 $\sigma$ )	$D_{1420}$	815.9	$817^{+48}_{-45}$	(−0.5 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6667	$0.667^{+0.013}_{-0.013}$	(+0.3 $\sigma$ )
$\Omega_{\Lambda}$	0.7242	$0.724^{+0.048}_{-0.049}$	(−0.3 $\sigma$ )	$n_{\text{s},0.002}$	0.9908	$0.990^{+0.033}_{-0.033}$	(−0.4 $\sigma$ )	$f\sigma_8(0.57)$	0.4590	$0.457^{+0.037}_{-0.036}$	(+0.2 $\sigma$ )
$\Omega_{\text{m}}$	0.2758	$0.276^{+0.049}_{-0.048}$	(+0.3 $\sigma$ )	$Y_{\text{P}}$	0.306	$0.299^{+0.095}_{-0.097}$	(+0.3 $\sigma$ )	$\sigma_8(0.57)$	0.6091	$0.607^{+0.035}_{-0.032}$	(−0.0 $\sigma$ )
$\Omega_{\text{m}} h^2$	0.1407	$0.1405^{+0.0064}_{-0.0059}$	(+0.6 $\sigma$ )	Age/Gyr	13.506	$13.51^{+0.32}_{-0.32}$	(−0.1 $\sigma$ )	$\chi^2_{\text{lowTEB}}$	10492.83	$10494.5 (\nu: 3.1)$	(+0.1 $\sigma$ )
$\Omega_{\text{m}} h^3$	0.10048	$0.1004^{+0.0048}_{-0.0048}$	(+0.3 $\sigma$ )	$z_*$	1089.22	$1089.0^{+4.0}_{-3.9}$	(+0.2 $\sigma$ )	$\chi^2_{\text{CamSpec}}$	2187.1	$2192.4 (\nu: 6.3)$	
$\sigma_8$	0.8067	$0.804^{+0.051}_{-0.047}$	(+0.1 $\sigma$ )	$r_*$	143.63	$143.7^{+1.6}_{-1.6}$	(−0.7 $\sigma$ )	$\chi^2_{\text{prior}}$	10.06	$12.0 (\nu: 2.0)$	(+1.0 $\sigma$ )
$\sigma_8 \Omega_{\text{m}}^{0.5}$	0.424	$0.422^{+0.055}_{-0.053}$	(+0.2 $\sigma$ )	$100\theta_*$	1.04050	$1.0405^{+0.0018}_{-0.0017}$	(−0.1 $\sigma$ )	$\chi^2_{\text{CMB}}$	12680.0	$12686.9 (\nu: 6.8)$	(+295.6 $\sigma$ )

Best-fit  $\chi^2_{\text{eff}} = 12690.02$ ;  $\Delta\chi^2_{\text{eff}} = 1441.88$ ;  $\bar{\chi}^2_{\text{eff}} = 12698.95$ ;  $\Delta\bar{\chi}^2_{\text{eff}} = 1436.69$ ;  $R - 1 = 0.00782$

$\chi^2_{\text{eff}}$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03\_v5c\_Ap: 10492.83 ( $\Delta$  0.40) CamSpec like\_v9.10CMH\_unified: 2187.13

### 23.33 base\_yhe\_plikHM\_TE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02183	$0.02192^{+0.00072}_{-0.00069}$	$\sigma_8$	0.7956	$0.798^{+0.036}_{-0.034}$	$D_A/\text{Gpc}$	13.961	$13.942^{+0.097}_{-0.10}$
$\Omega_c h^2$	0.11973	$0.1198^{+0.0044}_{-0.0043}$	$\sigma_8 \Omega_m^{0.5}$	0.4550	$0.454^{+0.033}_{-0.033}$	$z_{\text{drag}}$	1055.85	$1056.8^{+4.3}_{-3.5}$
$100\theta_{\text{MC}}$	1.03773	$1.0385^{+0.0036}_{-0.0031}$	$\sigma_8 \Omega_m^{0.25}$	0.6017	$0.602^{+0.033}_{-0.032}$	$r_{\text{drag}}$	148.03	$147.8^{+1.0}_{-1.1}$
$\tau$	0.0519	$0.052^{+0.033}_{-0.040}$	$\sigma_8/h^{0.5}$	0.9798	$0.980^{+0.049}_{-0.047}$	$k_D$	0.14301	$0.1424^{+0.0028}_{-0.0032}$
$Y_P$	0.152	$< 0.265$	$\langle d^2 \rangle^{1/2}$	2.492	$2.48^{+0.13}_{-0.14}$	$100\theta_D$	0.15735	$0.1583^{+0.0038}_{-0.0032}$
$\ln(10^{10} A_s)$	3.030	$3.029^{+0.077}_{-0.082}$	$z_{\text{re}}$	7.17	$7.1^{+3.5}_{-4.0}$	$z_{\text{eq}}$	3383	$3386^{+98}_{-95}$
$n_s$	0.9384	$0.945^{+0.037}_{-0.034}$	$10^9 A_s$	2.069	$2.07^{+0.16}_{-0.17}$	$k_{\text{eq}}$	0.010325	$0.01034^{+0.00030}_{-0.00029}$
$y_{\text{cal}}$	1.00014	$0.99998^{+0.0049}_{-0.0049}$	$10^9 A_s e^{-2\tau}$	1.8648	$1.865^{+0.039}_{-0.038}$	$100\theta_{\text{eq}}$	0.8128	$0.813^{+0.020}_{-0.019}$
$A_{100}^{\text{dustTE}}$	0.134	$0.137^{+0.073}_{-0.074}$	$D_{40}$	1286	$1271^{+83}_{-87}$	$100\theta_{s,\text{eq}}$	0.4495	$0.450^{+0.010}_{-0.0096}$
$A_{100 \times 143}^{\text{dustTE}}$	0.140	$0.134^{+0.057}_{-0.058}$	$D_{220}$	5796	$5766^{+140}_{-150}$	$r_{\text{drag}}/D_V(0.57)$	0.07072	$0.0709^{+0.0019}_{-0.0018}$
$A_{100 \times 217}^{\text{dustTE}}$	0.299	$0.31^{+0.16}_{-0.17}$	$D_{810}$	2559	$2547^{+64}_{-68}$	$H(0.57)$	91.82	$92.1^{+1.6}_{-1.4}$
$A_{143}^{\text{dustTE}}$	0.159	$0.16^{+0.11}_{-0.11}$	$D_{1420}$	839.6	$832^{+39}_{-41}$	$D_A(0.57)$	1414.0	$1409^{+38}_{-41}$
$A_{143 \times 217}^{\text{dustTE}}$	0.341	$0.34^{+0.16}_{-0.16}$	$D_{2000}$	243.8	$240^{+18}_{-19}$	$F_{\text{AP}}(0.57)$	0.6799	$0.6793^{+0.0081}_{-0.0087}$
$A_{217}^{\text{dustTE}}$	1.65	$1.65^{+0.51}_{-0.50}$	$n_{s,0.002}$	0.9384	$0.945^{+0.037}_{-0.034}$	$f\sigma_8(0.57)$	0.4663	$0.467^{+0.023}_{-0.022}$
$c_{100}$	0.99935	$0.9992^{+0.0019}_{-0.0020}$	$Y_P$	0.152	$0.174^{+0.098}_{-0.084}$	$\sigma_8(0.57)$	0.5883	$0.591^{+0.027}_{-0.026}$
$H_0$	65.94	$66.3^{+2.8}_{-2.6}$	$Y_P^{\text{BBN}}$	0.153	$0.175^{+0.098}_{-0.084}$	$\chi_{\text{lowEB}}^2$	5430.72	$5431.7 (\nu: 0.8)$
$\Omega_\Lambda$	0.6729	$0.675^{+0.034}_{-0.033}$	Age/Gyr	13.948	$13.91^{+0.16}_{-0.18}$	$\chi_{\text{plikTE}}^2$	929.3	$937.0 (\nu: 8.3)$
$\Omega_m$	0.3271	$0.325^{+0.033}_{-0.034}$	$z_*$	1087.15	$1087.9^{+3.0}_{-2.6}$	$\chi_{\text{prior}}^2$	1.8	$7.8 (\nu: 6.5)$
$\Omega_m h^2$	0.14221	$0.1424^{+0.0041}_{-0.0040}$	$r_*$	145.22	$145.1^{+1.0}_{-1.0}$	$\chi_{\text{CMB}}^2$	6360.0	$6368.7 (\nu: 9.1)$
$\Omega_m h^3$	0.09377	$0.0943^{+0.0026}_{-0.0022}$	$100\theta_*$	1.04018	$1.0404^{+0.0015}_{-0.0014}$			

Best-fit  $\chi_{\text{eff}}^2 = 6361.86$ ;  $\bar{\chi}_{\text{eff}}^2 = 6376.48$ ;  $R - 1 = 0.00468$

$\chi_{\text{eff}}^2$ : CMB - lowl\_QU\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 5430.72 plik\_dx11dr2\_HM\_v18\_TE: 929.32

### 23.34 base\_yhe\_plikHM\_EE\_lowEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02277	$0.0235^{+0.0031}_{-0.0028}$	$\sigma_8 \Omega_m^{0.5}$	0.437	$0.430^{+0.073}_{-0.072}$	$z_{\text{drag}}$	1057.7	$1060.7^{+9.1}_{-8.6}$
$\Omega_c h^2$	0.1159	$0.115^{+0.010}_{-0.0099}$	$\sigma_8 \Omega_m^{0.25}$	0.588	$0.583^{+0.065}_{-0.062}$	$r_{\text{drag}}$	148.00	$147.2^{+2.2}_{-2.3}$
$100\theta_{\text{MC}}$	1.03647	$1.0382^{+0.0053}_{-0.0046}$	$\sigma_8/h^{0.5}$	0.962	$0.955^{+0.093}_{-0.091}$	$k_{\text{D}}$	0.14393	$0.1432^{+0.0035}_{-0.0038}$
$\tau$	0.0575	$0.058^{+0.039}_{-0.041}$	$\langle d^2 \rangle^{1/2}$	2.478	$2.43^{+0.21}_{-0.21}$	$100\theta_{\text{D}}$	0.1559	$0.1574^{+0.0053}_{-0.0047}$
$Y_{\text{P}}$	0.146	$< 0.317$	$z_{\text{re}}$	7.42	$7.4^{+3.6}_{-3.9}$	$z_{\text{eq}}$	3314	$3318^{+190}_{-190}$
$\ln(10^{10} A_{\text{s}})$	3.060	$3.062^{+0.085}_{-0.080}$	$10^9 A_{\text{s}}$	2.133	$2.14^{+0.18}_{-0.18}$	$k_{\text{eq}}$	0.01012	$0.01013^{+0.00059}_{-0.00057}$
$n_{\text{s}}$	0.943	$0.960^{+0.053}_{-0.050}$	$10^9 A_{\text{s}} e^{-2\tau}$	1.901	$1.906^{+0.051}_{-0.051}$	$100\theta_{\text{eq}}$	0.8270	$0.830^{+0.043}_{-0.042}$
$y_{\text{cal}}$	0.99975	$1.0000^{+0.0048}_{-0.0048}$	$D_{40}$	1318	$1287^{+110}_{-120}$	$100\theta_{\text{s,eq}}$	0.4561	$0.457^{+0.020}_{-0.020}$
$A_{100}^{\text{dustEE}}$	0.0794	$0.080^{+0.012}_{-0.012}$	$D_{220}$	6063	$6059^{+420}_{-430}$	$r_{\text{drag}}/D_{\text{V}}(0.57)$	0.07171	$0.0724^{+0.0042}_{-0.0039}$
$A_{100 \times 143}^{\text{dustEE}}$	0.0463	$0.047^{+0.011}_{-0.011}$	$D_{810}$	2626	$2609^{+96}_{-100}$	$H(0.57)$	92.61	$93.7^{+4.2}_{-4.0}$
$A_{100 \times 217}^{\text{dustEE}}$	0.103	$0.099^{+0.064}_{-0.065}$	$D_{1420}$	867	$854^{+53}_{-60}$	$D_{\text{A}}(0.57)$	1390	$1369^{+95}_{-95}$
$A_{143}^{\text{dustEE}}$	0.0974	$0.098^{+0.015}_{-0.015}$	$D_{2000}$	253.8	$247^{+25}_{-27}$	$F_{\text{AP}}(0.57)$	0.6742	$0.672^{+0.020}_{-0.017}$
$A_{143 \times 217}^{\text{dustEE}}$	0.220	$0.223^{+0.092}_{-0.092}$	$n_{\text{s},0.002}$	0.943	$0.960^{+0.053}_{-0.050}$	$f\sigma_8(0.57)$	0.4583	$0.456^{+0.042}_{-0.043}$
$A_{217}^{\text{dustEE}}$	0.642	$0.64^{+0.26}_{-0.25}$	$Y_{\text{P}}$	0.146	$0.20^{+0.13}_{-0.11}$	$\sigma_8(0.57)$	0.5903	$0.594^{+0.032}_{-0.029}$
$H_0$	67.6	$69.1^{+6.9}_{-6.5}$	$Y_{\text{P}}^{\text{BBN}}$	0.147	$0.20^{+0.13}_{-0.11}$	$\chi_{\text{lowEB}}^2$	5430.78	$5431.8 (\nu: 1.1)$
$\Omega_{\Lambda}$	0.695	$0.705^{+0.071}_{-0.076}$	Age/Gyr	13.873	$13.74^{+0.41}_{-0.46}$	$\chi_{\text{plikEE}}^2$	750.0	$758.2 (\nu: 9.8)$
$\Omega_{\text{m}}$	0.305	$0.295^{+0.076}_{-0.071}$	$z_*$	1085.58	$1086.6^{+4.9}_{-4.6}$	$\chi_{\text{prior}}^2$	3.2	$7.6 (\nu: 5.8)$
$\Omega_{\text{m}} h^2$	0.1393	$0.1395^{+0.0081}_{-0.0078}$	$r_*$	145.49	$144.9^{+1.8}_{-1.9}$	$\chi_{\text{CMB}}^2$	6180.8	$6190.0 (\nu: 10.6)$
$\Omega_{\text{m}} h^3$	0.0943	$0.0963^{+0.0063}_{-0.0058}$	$100\theta_*$	1.03885	$1.0394^{+0.0025}_{-0.0022}$			
$\sigma_8$	0.7912	$0.792^{+0.050}_{-0.049}$	$D_{\text{A}}/\text{Gpc}$	14.005	$13.94^{+0.19}_{-0.19}$			

Best-fit  $\chi_{\text{eff}}^2 = 6183.95$ ;  $\bar{\chi}_{\text{eff}}^2 = 6197.61$ ;  $R - 1 = 0.01270$

$\chi_{\text{eff}}^2$ : CMB - lowl\_QU\_70\_dx11d.2014\_10\_03\_v5c\_Ap: 5430.78 plik\_dx11dr2\_HM\_v18\_EE: 750.00

### 23.35 base\_yhe\_CamSpecDS\_TT\_lowTEB

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02239^{+0.00066}_{-0.00062} \quad (+0.3\sigma)$	$\beta_1^1$	$0.0^{+1.9}_{-2.0}$	$r_*$	$144.60^{+0.95}_{-0.94} \quad (-0.0\sigma)$
$\Omega_c h^2$	$0.1191^{+0.0046}_{-0.0045} \quad (-0.1\sigma)$	$H_0$	$67.9^{+2.5}_{-2.4} \quad (+0.2\sigma)$	$100\theta_*$	$1.04125^{+0.00099}_{-0.0010} \quad (+0.2\sigma)$
$100\theta_{\text{MC}}$	$1.0414^{+0.0018}_{-0.0018} \quad (+0.3\sigma)$	$\Omega_\Lambda$	$0.691^{+0.029}_{-0.032} \quad (+0.2\sigma)$	$z_{\text{drag}}$	$1060.4^{+2.5}_{-2.5} \quad (+0.3\sigma)$
$\tau$	$0.079^{+0.042}_{-0.040} \quad (-0.1\sigma)$	$\Omega_m$	$0.309^{+0.032}_{-0.029} \quad (-0.2\sigma)$	$r_{\text{drag}}$	$147.27^{+0.96}_{-0.96} \quad (-0.1\sigma)$
$Y_{\text{P}}$	$0.258^{+0.039}_{-0.042} \quad (+0.3\sigma)$	$\Omega_m h^2$	$0.1421^{+0.0042}_{-0.0041} \quad (-0.1\sigma)$	$k_{\text{D}}$	$0.1402^{+0.0015}_{-0.0014} \quad (-0.2\sigma)$
$\ln(10^{10} A_s)$	$3.093^{+0.082}_{-0.079} \quad (-0.1\sigma)$	$\Omega_m h^3$	$0.0964^{+0.0016}_{-0.0015} \quad (+0.3\sigma)$	$100\theta_{\text{D}}$	$0.1614^{+0.0015}_{-0.0015} \quad (+0.3\sigma)$
$n_s$	$0.973^{+0.024}_{-0.023} \quad (+0.4\sigma)$	$\sigma_8$	$0.831^{+0.034}_{-0.032} \quad (-0.1\sigma)$	$z_{\text{eq}}$	$3381^{+100}_{-98} \quad (-0.1\sigma)$
$y_{\text{cal}}$	$1.0003^{+0.0049}_{-0.0050} \quad (-0.0\sigma)$	$\sigma_8 \Omega_m^{0.5}$	$0.462^{+0.026}_{-0.025} \quad (-0.2\sigma)$	$100\theta_{\text{eq}}$	$0.818^{+0.020}_{-0.020} \quad (+0.1\sigma)$
$A_{100}^{\text{PS}}$	$283^{+40}_{-50} \quad (+0.8\sigma)$	$\sigma_8 \Omega_m^{0.25}$	$0.620^{+0.026}_{-0.026} \quad (-0.2\sigma)$	$r_{\text{drag}}/D_{\text{V}}(0.57)$	$0.0717^{+0.0017}_{-0.0017} \quad (+0.2\sigma)$
$A_{143}^{\text{PS}}$	$48^{+20}_{-20} \quad (+0.4\sigma)$	$\sigma_8/h^{0.5}$	$1.009^{+0.039}_{-0.039} \quad (-0.2\sigma)$	$H(0.57)$	$93.2^{+1.3}_{-1.2} \quad (+0.3\sigma)$
$A_{217}^{\text{PS}}$	$87^{+20}_{-20} \quad (-0.9\sigma)$	$\langle d^2 \rangle^{1/2}$	$2.478^{+0.089}_{-0.091} \quad (-0.4\sigma)$	$D_{\text{A}}(0.57)$	$1384^{+34}_{-34} \quad (-0.2\sigma)$
$A_{217}^{\text{CIB}}$	$54^{+10}_{-10} \quad (-1.5\sigma)$	$z_{\text{re}}$	$10.0^{+3.5}_{-3.9} \quad (-0.1\sigma)$	$F_{\text{AP}}(0.57)$	$0.6754^{+0.0079}_{-0.0076} \quad (-0.2\sigma)$
$A_{143}^{\text{tSZ}}$	$< 6.16 \quad (-1.1\sigma)$	$10^9 A_s$	$2.21^{+0.19}_{-0.17} \quad (-0.1\sigma)$	$f\sigma_8(0.57)$	$0.482^{+0.019}_{-0.019} \quad (-0.1\sigma)$
$r_{143 \times 217}^{\text{PS}}$	$0.55^{+0.20}_{-0.19}$	$10^9 A_s e^{-2\tau}$	$1.882^{+0.030}_{-0.029} \quad (+0.0\sigma)$	$\sigma_8(0.57)$	$0.619^{+0.028}_{-0.026} \quad (+0.0\sigma)$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$D_{40}$	$1223^{+42}_{-40} \quad (-0.5\sigma)$	$f_{2000}^{143}$	$34^{+6}_{-7} \quad (+0.8\sigma)$
$A^{\text{kSZ}}$	—	$D_{220}$	$5710^{+82}_{-81} \quad (-0.2\sigma)$	$f_{2000}^{217}$	$109.0^{+4.7}_{-4.9} \quad (+0.9\sigma)$
$A_{100}^{\text{dust}}$	$0.97^{+0.37}_{-0.38}$	$D_{810}$	$2535^{+27}_{-28} \quad (+0.0\sigma)$	$f_{2000}^{143 \times 217}$	$36^{+5}_{-5} \quad (+1.1\sigma)$
$A_{143}^{\text{dust}}$	$1.07^{+0.36}_{-0.36}$	$D_{1420}$	$814^{+10}_{-10} \quad (+0.0\sigma)$	$\chi_{\text{lowTEB}}^2$	$10496.1 \quad (\nu: 2.9) \quad (-0.4\sigma)$
$A_{217}^{\text{dust}}$	$1.16^{+0.23}_{-0.23}$	$n_{s,0.002}$	$0.973^{+0.024}_{-0.023} \quad (+0.4\sigma)$	$\chi_{\text{CamSpec}}^2$	$8155.5 \quad (\nu: 17.6)$
$A_{143 \times 217}^{\text{dust}}$	$0.97^{+0.35}_{-0.35}$	$Y_{\text{P}}$	$0.258^{+0.039}_{-0.042} \quad (+0.3\sigma)$	$\chi_{\text{prior}}^2$	$7.4 \quad (\nu: 5.4) \quad (-0.0\sigma)$
$c_{100}$	$0.9984^{+0.0019}_{-0.0019} \quad (+0.7\sigma)$	Age/Gyr	$13.78^{+0.12}_{-0.13} \quad (-0.3\sigma)$	$\chi_{\text{CMB}}^2$	$18651.7 \quad (\nu: 17.3) \quad (+1299.1\sigma)$
$c_{217}$	$0.9994^{+0.0034}_{-0.0035} \quad (+2.3\sigma)$	$z_*$	$1090.3^{+1.3}_{-1.2} \quad (+0.2\sigma)$		

$$\bar{\chi}_{\text{eff}}^2 = 18659.07; \Delta\bar{\chi}_{\text{eff}}^2 = 7376.23; R - 1 = 0.00489$$

### 23.36 base\_yhe\_plikDS\_TT\_lowTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02235	$0.02236^{+0.00066}_{-0.00063}$ (+0.1 $\sigma$ )	$\Omega_\Lambda$	0.6880	$0.688^{+0.030}_{-0.032}$ (+0.0 $\sigma$ )	$100\theta_*$	1.04109	$1.04116^{+0.00099}_{-0.00098}$ (+0.0 $\sigma$ )
$\Omega_c h^2$	0.11948	$0.1194^{+0.0046}_{-0.0045}$ (−0.0 $\sigma$ )	$\Omega_m$	0.3120	$0.312^{+0.032}_{-0.030}$ (−0.0 $\sigma$ )	$D_A/\text{Gpc}$	13.885	$13.885^{+0.088}_{-0.088}$ (−0.1 $\sigma$ )
$100\theta_{\text{MC}}$	1.04107	$1.0412^{+0.0018}_{-0.0018}$ (+0.1 $\sigma$ )	$\Omega_m h^2$	0.14247	$0.1424^{+0.0043}_{-0.0042}$ (+0.0 $\sigma$ )	$z_{\text{drag}}$	1060.05	$1060.2^{+2.5}_{-2.5}$ (+0.1 $\sigma$ )
$\tau$	0.0774	$0.078^{+0.042}_{-0.040}$ (−0.1 $\sigma$ )	$\Omega_m h^3$	0.09627	$0.0963^{+0.0016}_{-0.0015}$ (+0.2 $\sigma$ )	$r_{\text{drag}}$	147.24	$147.24^{+0.96}_{-0.97}$ (−0.1 $\sigma$ )
$Y_P$	0.2517	$0.254^{+0.040}_{-0.041}$ (+0.1 $\sigma$ )	$\sigma_8$	0.8295	$0.830^{+0.033}_{-0.031}$ (−0.1 $\sigma$ )	$k_D$	0.14044	$0.1403^{+0.0015}_{-0.0015}$ (+0.0 $\sigma$ )
$\ln(10^{10} A_s)$	3.090	$3.092^{+0.084}_{-0.079}$ (−0.1 $\sigma$ )	$\sigma_8 \Omega_m^{0.5}$	0.4634	$0.463^{+0.026}_{-0.025}$ (−0.1 $\sigma$ )	$100\theta_D$	0.16110	$0.1612^{+0.0015}_{-0.0015}$ (+0.0 $\sigma$ )
$n_s$	0.9689	$0.970^{+0.024}_{-0.023}$ (+0.1 $\sigma$ )	$\sigma_8 \Omega_m^{0.25}$	0.6200	$0.620^{+0.025}_{-0.025}$ (−0.1 $\sigma$ )	$z_{\text{eq}}$	3389	$3388^{+100}_{-99}$ (+0.0 $\sigma$ )
$y_{\text{cal}}$	1.00030	$1.0004^{+0.0048}_{-0.0049}$ (−0.0 $\sigma$ )	$\sigma_8/h^{0.5}$	1.0092	$1.010^{+0.038}_{-0.037}$ (−0.1 $\sigma$ )	$k_{\text{eq}}$	0.010344	$0.01034^{+0.00031}_{-0.00030}$ (+0.0 $\sigma$ )
$A_{217}^{\text{CIB}}$	71.3	$68^{+10}_{-10}$ (+0.5 $\sigma$ )	$\langle d^2 \rangle^{1/2}$	2.488	$2.487^{+0.090}_{-0.089}$ (−0.2 $\sigma$ )	$100\theta_{\text{eq}}$	0.8157	$0.816^{+0.020}_{-0.020}$ (+0.0 $\sigma$ )
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$z_{\text{re}}$	9.93	$9.9^{+3.6}_{-3.9}$ (−0.1 $\sigma$ )	$100\theta_{\text{s,eq}}$	0.4506	$0.451^{+0.010}_{-0.010}$ (−0.0 $\sigma$ )
$A_{143}^{\text{tSZ}}$	6.78	$4.5^{+3.8}_{-4.0}$ (−0.2 $\sigma$ )	$10^9 A_s$	2.197	$2.20^{+0.19}_{-0.17}$ (−0.1 $\sigma$ )	$r_{\text{drag}}/D_V(0.57)$	0.07154	$0.0716^{+0.0017}_{-0.0017}$ (+0.0 $\sigma$ )
$A_{100}^{\text{PS}}$	279	$285^{+50}_{-60}$ (+0.9 $\sigma$ )	$10^9 A_s e^{-2\tau}$	1.8822	$1.883^{+0.029}_{-0.029}$ (+0.1 $\sigma$ )	$H(0.57)$	93.04	$93.1^{+1.3}_{-1.2}$ (+0.1 $\sigma$ )
$A_{143}^{\text{PS}}$	45.0	$50^{+20}_{-20}$ (+0.6 $\sigma$ )	$D_{40}$	1230.3	$1230^{+42}_{-41}$ (−0.1 $\sigma$ )	$D_A(0.57)$	1387.7	$1387^{+33}_{-34}$ (−0.1 $\sigma$ )
$A_{143 \times 217}^{\text{PS}}$	35.0	$41^{+20}_{-20}$ (+0.1 $\sigma$ )	$D_{220}$	5720	$5720^{+81}_{-78}$ (+0.0 $\sigma$ )	$F_{\text{AP}}(0.57)$	0.6762	$0.6760^{+0.0079}_{-0.0077}$ (−0.0 $\sigma$ )
$A_{217}^{\text{PS}}$	93.6	$93^{+20}_{-20}$ (−0.4 $\sigma$ )	$D_{810}$	2535.7	$2536^{+27}_{-27}$ (+0.0 $\sigma$ )	$f\sigma_8(0.57)$	0.4824	$0.483^{+0.018}_{-0.018}$ (−0.1 $\sigma$ )
$A^{\text{kSZ}}$	0.0	—	$D_{1420}$	814.7	$814^{+10}_{-10}$ (+0.0 $\sigma$ )	$\sigma_8(0.57)$	0.6170	$0.618^{+0.028}_{-0.026}$ (−0.1 $\sigma$ )
$A_{100}^{\text{dustTT}}$	7.42	$7.4^{+3.7}_{-3.7}$ (−0.0 $\sigma$ )	$D_{2000}$	230.10	$229.8^{+4.6}_{-4.6}$ (−0.0 $\sigma$ )	$f_{2000}^{143}$	33.4	$34^{+7}_{-7}$ (+0.9 $\sigma$ )
$A_{143}^{\text{dustTT}}$	9.19	$9.1^{+3.6}_{-3.6}$ (+0.0 $\sigma$ )	$n_{\text{s},0.002}$	0.9689	$0.970^{+0.024}_{-0.023}$ (+0.1 $\sigma$ )	$f_{2000}^{143 \times 217}$	33.4	$34^{+5}_{-5}$ (+0.3 $\sigma$ )
$A_{143 \times 217}^{\text{dustTT}}$	18.0	$17.3^{+8.1}_{-8.2}$ (+0.0 $\sigma$ )	$Y_P$	0.2517	$0.254^{+0.040}_{-0.041}$ (+0.1 $\sigma$ )	$f_{2000}^{217}$	114.16	$114.5^{+4.8}_{-4.8}$ (+3.0 $\sigma$ )
$A_{217}^{\text{dustTT}}$	80.9	$81^{+10}_{-10}$ (−0.2 $\sigma$ )	$Y_P^{\text{BBN}}$	0.2531	$0.255^{+0.040}_{-0.041}$ (+0.1 $\sigma$ )	$\chi_{\text{lowTEB}}^2$	10495.75	$10496.8$ ( $\nu$ : 3.3) (−0.2 $\sigma$ )
$c_{100}$	0.99793	$0.9979^{+0.0015}_{-0.0015}$ (+0.0 $\sigma$ )	Age/Gyr	13.793	$13.79^{+0.12}_{-0.13}$ (−0.1 $\sigma$ )	$\chi_{\text{plik}}^2$	748.2	$762.4$ ( $\nu$ : 16.6) (−2.7 $\sigma$ )
$c_{217}$	0.99640	$0.9964^{+0.0029}_{-0.0029}$ (+0.3 $\sigma$ )	$z_*$	1090.16	$1090.2^{+1.2}_{-1.2}$ (+0.0 $\sigma$ )	$\chi_{\text{prior}}^2$	2.0	$7.3$ ( $\nu$ : 6.2) (−0.0 $\sigma$ )
$H_0$	67.57	$67.7^{+2.5}_{-2.4}$ (+0.1 $\sigma$ )	$r_*$	144.56	$144.57^{+0.95}_{-0.96}$ (−0.1 $\sigma$ )	$\chi_{\text{CMB}}^2$	11244.0	$11259.2$ ( $\nu$ : 15.9) (−2.9 $\sigma$ )

Best-fit  $\chi_{\text{eff}}^2 = 11246.03$ ;  $\Delta\chi_{\text{eff}}^2 = -15.88$ ;  $\bar{\chi}_{\text{eff}}^2 = 11266.48$ ;  $\Delta\bar{\chi}_{\text{eff}}^2 = -16.36$ ;  $R - 1 = 0.01104$

$\chi_{\text{eff}}^2$ : CMB - lowl\_SMW\_70\_dx11d\_2014\_10\_03.v5c\_Ap: 10495.75 ( $\Delta$  -0.48) plik\_dx11dr2\_DS.v18\_TT: 748.25

### 23.37 base\_yhe\_plikHM\_TT\_WMAPTEB

Parameter	Best fit	95% limits	Parameter	Best fit	95% limits	Parameter	Best fit	95% limits
$\Omega_b h^2$	0.02223	$0.02226^{+0.00060}_{-0.00059}$	$\Omega_\Lambda$	0.6844	$0.685^{+0.027}_{-0.029}$	$100\theta_*$	1.04107	$1.04112^{+0.00097}_{-0.00098}$
$\Omega_c h^2$	0.11992	$0.1198^{+0.0043}_{-0.0042}$	$\Omega_m$	0.3156	$0.315^{+0.029}_{-0.027}$	$D_A/\text{Gpc}$	13.885	$13.884^{+0.088}_{-0.089}$
$100\theta_{\text{MC}}$	1.04093	$1.0411^{+0.0017}_{-0.0017}$	$\Omega_m h^2$	0.14279	$0.1427^{+0.0040}_{-0.0039}$	$z_{\text{drag}}$	1059.67	$1059.9^{+2.3}_{-2.3}$
$\tau$	0.0726	$0.074^{+0.025}_{-0.023}$	$\Omega_m h^3$	0.09605	$0.0962^{+0.0015}_{-0.0015}$	$r_{\text{drag}}$	147.27	$147.25^{+0.97}_{-0.98}$
$Y_{\text{P}}$	0.2474	$0.250^{+0.039}_{-0.040}$	$\sigma_8$	0.8267	$0.828^{+0.023}_{-0.023}$	$k_{\text{D}}$	0.14049	$0.1404^{+0.0014}_{-0.0014}$
$\ln(10^{10} A_s)$	3.0804	$3.084^{+0.050}_{-0.047}$	$\sigma_8 \Omega_m^{0.5}$	0.4644	$0.464^{+0.027}_{-0.026}$	$100\theta_{\text{D}}$	0.16105	$0.1612^{+0.0015}_{-0.0015}$
$n_s$	0.9660	$0.967^{+0.022}_{-0.021}$	$\sigma_8 \Omega_m^{0.25}$	0.6196	$0.620^{+0.024}_{-0.023}$	$z_{\text{eq}}$	3397	$3395^{+95}_{-94}$
$y_{\text{cal}}$	1.00048	$1.0004^{+0.0049}_{-0.0050}$	$\sigma_8/h^{0.5}$	1.0079	$1.009^{+0.034}_{-0.033}$	$k_{\text{eq}}$	0.010368	$0.01036^{+0.00029}_{-0.00029}$
$A_{217}^{\text{CIB}}$	67.4	$64^{+10}_{-10}$	$\langle d^2 \rangle^{1/2}$	2.488	$2.488^{+0.085}_{-0.081}$	$100\theta_{\text{eq}}$	0.8138	$0.814^{+0.018}_{-0.018}$
$\xi^{\text{tSZ} \times \text{CIB}}$	0.00	—	$z_{\text{re}}$	9.50	$9.6^{+2.2}_{-2.2}$	$100\theta_{\text{s,eq}}$	0.4498	$0.4501^{+0.0093}_{-0.0093}$
$A_{143}^{\text{tSZ}}$	7.12	$5.0^{+3.8}_{-3.8}$	$10^9 A_s$	2.177	$2.19^{+0.11}_{-0.10}$	$r_{\text{drag}}/D_V(0.57)$	0.07136	$0.0714^{+0.0016}_{-0.0015}$
$A_{100}^{\text{PS}}$	254	$260^{+60}_{-60}$	$10^9 A_s e^{-2\tau}$	1.8828	$1.884^{+0.030}_{-0.030}$	$H(0.57)$	92.87	$93.0^{+1.1}_{-1.1}$
$A_{143}^{\text{PS}}$	39.8	$45^{+20}_{-20}$	$D_{40}$	1234.0	$1233^{+41}_{-40}$	$D_A(0.57)$	1392.2	$1390^{+30}_{-30}$
$A_{143 \times 217}^{\text{PS}}$	33	$40^{+20}_{-20}$	$D_{220}$	5717	$5718^{+80}_{-81}$	$F_{\text{AP}}(0.57)$	0.6771	$0.6768^{+0.0073}_{-0.0070}$
$A_{217}^{\text{PS}}$	97.6	$97^{+20}_{-20}$	$D_{810}$	2536.1	$2536^{+28}_{-28}$	$f\sigma_8(0.57)$	0.4817	$0.482^{+0.016}_{-0.016}$
$A^{\text{kSZ}}$	0.0	—	$D_{1420}$	814.9	$814^{+10}_{-10}$	$\sigma_8(0.57)$	0.6140	$0.615^{+0.018}_{-0.017}$
$A_{100}^{\text{dustTT}}$	7.48	$7.5^{+3.7}_{-3.7}$	$D_{2000}$	230.18	$229.8^{+4.7}_{-4.7}$	$f_{2000}^{143}$	30.1	$31^{+7}_{-7}$
$A_{143}^{\text{dustTT}}$	9.08	$9.0^{+3.7}_{-3.6}$	$n_{\text{s},0.002}$	0.9660	$0.967^{+0.022}_{-0.021}$	$f_{2000}^{143 \times 217}$	32.7	$33^{+6}_{-6}$
$A_{143 \times 217}^{\text{dustTT}}$	17.6	$17.2^{+8.2}_{-8.2}$	$Y_{\text{P}}$	0.2474	$0.250^{+0.039}_{-0.040}$	$f_{2000}^{217}$	106.3	$106.6^{+5.1}_{-5.1}$
$A_{217}^{\text{dustTT}}$	82.1	$82^{+10}_{-10}$	$Y_{\text{P}}^{\text{BBN}}$	0.2487	$0.252^{+0.039}_{-0.040}$	$\chi_{\text{WMAPTEB}}^2$	19734.0	$19735.2 (\nu: 3.4)$
$c_{100}$	0.99792	$0.9979^{+0.0016}_{-0.0015}$	Age/Gyr	13.812	$13.80^{+0.11}_{-0.11}$	$\chi_{\text{plik}}^2$	764.1	$778.5 (\nu: 17.1)$
$c_{217}$	0.99597	$0.9960^{+0.0029}_{-0.0028}$	$z_*$	1090.18	$1090.3^{+1.3}_{-1.3}$	$\chi_{\text{prior}}^2$	2.1	$7.4 (\nu: 6.4)$
$H_0$	67.26	$67.4^{+2.2}_{-2.1}$	$r_*$	144.55	$144.54^{+0.94}_{-0.96}$	$\chi_{\text{CMB}}^2$	20498.1	$20513.7 (\nu: 16.1)$

Best-fit  $\chi_{\text{eff}}^2 = 20500.13$ ;  $\bar{\chi}_{\text{eff}}^2 = 20521.09$ ;  $R - 1 = 0.01182$

$\chi_{\text{eff}}^2$ : CMB - bflike\_WMAP353ggf\_LFI312\_nw8: 19733.98 plik\_dx11dr2\_HM\_v18\_TT: 764.09

### 23.38 base\_yhe\_plikHM\_TT\_WMAPTEB\_post\_lensing

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02235^{+0.00058}_{-0.00058}$	$\Omega_m$	$0.304^{+0.023}_{-0.022}$	$z_{\text{drag}}$	$1060.0^{+2.4}_{-2.2}$
$\Omega_c h^2$	$0.1181^{+0.0034}_{-0.0034}$	$\Omega_m h^2$	$0.1411^{+0.0031}_{-0.0031}$	$r_{\text{drag}}$	$147.59^{+0.84}_{-0.83}$
$100\theta_{\text{MC}}$	$1.0413^{+0.0016}_{-0.0016}$	$\Omega_m h^3$	$0.0962^{+0.0015}_{-0.0015}$	$k_D$	$0.1401^{+0.0013}_{-0.0014}$
$\tau$	$0.070^{+0.024}_{-0.023}$	$\sigma_8$	$0.819^{+0.018}_{-0.018}$	$100\theta_D$	$0.1612^{+0.0015}_{-0.0015}$
$Y_P$	$0.252^{+0.039}_{-0.038}$	$\sigma_8 \Omega_m^{0.5}$	$0.451^{+0.017}_{-0.017}$	$z_{\text{eq}}$	$3357^{+75}_{-75}$
$\ln(10^{10} A_s)$	$3.072^{+0.047}_{-0.044}$	$\sigma_8 \Omega_m^{0.25}$	$0.608^{+0.015}_{-0.015}$	$k_{\text{eq}}$	$0.01025^{+0.00023}_{-0.00023}$
$n_s$	$0.971^{+0.021}_{-0.019}$	$\sigma_8/h^{0.5}$	$0.992^{+0.022}_{-0.021}$	$100\theta_{\text{eq}}$	$0.822^{+0.015}_{-0.015}$
$y_{\text{cal}}$	$1.0001^{+0.0050}_{-0.0048}$	$\langle d^2 \rangle^{1/2}$	$2.446^{+0.054}_{-0.052}$	$100\theta_{\text{s,eq}}$	$0.4538^{+0.0077}_{-0.0075}$
$A_{217}^{\text{CIB}}$	$65^{+10}_{-10}$	$z_{\text{re}}$	$9.2^{+2.1}_{-2.1}$	$r_{\text{drag}}/D_V(0.57)$	$0.0720^{+0.0013}_{-0.0013}$
$\xi^{\text{tSZ} \times \text{CIB}}$	—	$10^9 A_s$	$2.16^{+0.10}_{-0.093}$	$H(0.57)$	$93.3^{+1.1}_{-0.99}$
$A_{143}^{\text{tSZ}}$	$5.0^{+3.9}_{-3.8}$	$10^9 A_s e^{-2\tau}$	$1.875^{+0.027}_{-0.027}$	$D_A(0.57)$	$1380^{+26}_{-26}$
$A_{100}^{\text{PS}}$	$261^{+60}_{-50}$	$D_{40}$	$1221^{+35}_{-36}$	$F_{\text{AP}}(0.57)$	$0.6742^{+0.0059}_{-0.0058}$
$A_{143}^{\text{PS}}$	$45^{+20}_{-20}$	$D_{220}$	$5717^{+81}_{-81}$	$f\sigma_8(0.57)$	$0.474^{+0.011}_{-0.011}$
$A_{143 \times 217}^{\text{PS}}$	$39^{+20}_{-20}$	$D_{810}$	$2533^{+28}_{-28}$	$\sigma_8(0.57)$	$0.611^{+0.017}_{-0.015}$
$A_{217}^{\text{PS}}$	$96^{+20}_{-20}$	$D_{1420}$	$814^{+11}_{-10}$	$f_{2000}^{143}$	$31^{+7}_{-7}$
$A^{\text{kSZ}}$	—	$D_{2000}$	$229.6^{+4.8}_{-4.6}$	$f_{2000}^{143 \times 217}$	$33^{+6}_{-5}$
$A_{100}^{\text{dustTT}}$	$7.6^{+3.7}_{-3.6}$	$n_{\text{s},0.002}$	$0.971^{+0.021}_{-0.019}$	$f_{2000}^{217}$	$106.7^{+5.2}_{-5.0}$
$A_{143}^{\text{dustTT}}$	$9.2^{+3.7}_{-3.6}$	$Y_P$	$0.252^{+0.039}_{-0.038}$	$\chi^2_{\text{lensing}}$	$9.9 (\nu: 1.2)$
$A_{143 \times 217}^{\text{dustTT}}$	$17.3^{+8.0}_{-8.2}$	$Y_P^{\text{BBN}}$	$0.253^{+0.039}_{-0.038}$	$\chi^2_{\text{WMAPTEB}}$	$19733.7 (\nu: 2.1)$
$A_{217}^{\text{dustTT}}$	$82^{+10}_{-10}$	Age/Gyr	$13.78^{+0.11}_{-0.11}$	$\chi^2_{\text{plik}}$	$780.3 (\nu: 28.9)$
$c_{100}$	$0.9979^{+0.0015}_{-0.0015}$	$z_*$	$1090.1^{+1.2}_{-1.3}$	$\chi^2_{\text{prior}}$	$7.6 (\nu: 6.4)$
$c_{217}$	$0.9960^{+0.0029}_{-0.0028}$	$r_*$	$144.91^{+0.80}_{-0.77}$	$\chi^2_{\text{CMB}}$	$20523.9 (\nu: 29.5)$
$H_0$	$68.1^{+1.9}_{-1.9}$	$100\theta_*$	$1.04135^{+0.00089}_{-0.00087}$		
$\Omega_\Lambda$	$0.696^{+0.022}_{-0.023}$	$D_A/\text{Gpc}$	$13.915^{+0.075}_{-0.075}$		

$$\bar{\chi}^2_{\text{eff}} = 20531.55; R - 1 = 0.02408$$



### 23.39 base\_yhe\_plikHM\_TT\_WMAPTEB\_post\_BAO

Parameter	95% limits	Parameter	95% limits	Parameter	95% limits
$\Omega_b h^2$	$0.02232^{+0.00048}_{-0.00049}$	$\Omega_m h^2$	$0.1421^{+0.0025}_{-0.0024}$	$k_D$	$0.1402^{+0.0011}_{-0.0011}$
$\Omega_c h^2$	$0.1191^{+0.0025}_{-0.0025}$	$\Omega_m h^3$	$0.0962^{+0.0015}_{-0.0014}$	$100\theta_D$	$0.1612^{+0.0014}_{-0.0014}$
$100\theta_{MC}$	$1.0412^{+0.0014}_{-0.0014}$	$\sigma_8$	$0.827^{+0.023}_{-0.022}$	$z_{eq}$	$3380^{+59}_{-58}$
$\tau$	$0.076^{+0.023}_{-0.022}$	$\sigma_8 \Omega_m^{0.5}$	$0.461^{+0.018}_{-0.017}$	$k_{eq}$	$0.01032^{+0.00018}_{-0.00018}$
$Y_P$	$0.253^{+0.036}_{-0.037}$	$\sigma_8 \Omega_m^{0.25}$	$0.617^{+0.019}_{-0.019}$	$100\theta_{eq}$	$0.817^{+0.011}_{-0.011}$
$\ln(10^{10} A_s)$	$3.086^{+0.048}_{-0.046}$	$\sigma_8/h^{0.5}$	$1.005^{+0.028}_{-0.028}$	$100\theta_{s,eq}$	$0.4516^{+0.0055}_{-0.0055}$
$n_s$	$0.970^{+0.016}_{-0.016}$	$\langle d^2 \rangle^{1/2}$	$2.478^{+0.066}_{-0.064}$	$r_{drag}/D_V(0.57)$	$0.07168^{+0.00086}_{-0.00085}$
$y_{cal}$	$1.0005^{+0.0050}_{-0.0049}$	$z_{re}$	$9.7^{+2.1}_{-2.1}$	$H(0.57)$	$93.10^{+0.73}_{-0.70}$
$A_{217}^{CIB}$	$65^{+10}_{-10}$	$10^9 A_s$	$2.19^{+0.11}_{-0.11}$	$D_A(0.57)$	$1386^{+17}_{-18}$
$\xi^{tSZ \times CIB}$	—	$10^9 A_s e^{-2\tau}$	$1.882^{+0.030}_{-0.029}$	$F_{AP}(0.57)$	$0.6756^{+0.0039}_{-0.0038}$
$A_{143}^{tSZ}$	$5.0^{+3.8}_{-3.8}$	$D_{40}$	$1228^{+33}_{-32}$	$f\sigma_8(0.57)$	$0.481^{+0.014}_{-0.014}$
$A_{100}^{PS}$	$261^{+60}_{-60}$	$D_{220}$	$5721^{+80}_{-81}$	$\sigma_8(0.57)$	$0.616^{+0.017}_{-0.017}$
$A_{143}^{PS}$	$45^{+20}_{-20}$	$D_{810}$	$2536^{+29}_{-28}$	$f_{2000}^{143}$	$31^{+7}_{-7}$
$A_{143 \times 217}^{PS}$	$40^{+20}_{-20}$	$D_{1420}$	$814^{+10}_{-10}$	$f_{2000}^{143 \times 217}$	$33^{+6}_{-5}$
$A_{217}^{PS}$	$97^{+20}_{-20}$	$D_{2000}$	$229.8^{+4.8}_{-4.8}$	$f_{2000}^{217}$	$106.8^{+5.1}_{-5.1}$
$A^{kSZ}$	—	$n_{s,0.002}$	$0.970^{+0.016}_{-0.016}$	$\chi^2_{WMAPTEB}$	$19734.6 (\nu: 2.9)$
$A_{100}^{dustTT}$	$7.5^{+3.7}_{-3.7}$	$Y_P$	$0.253^{+0.036}_{-0.037}$	$\chi^2_{plik}$	$778.5 (\nu: 26.5)$
$A_{143}^{dustTT}$	$9.1^{+3.7}_{-3.6}$	$Y_P^{BBN}$	$0.254^{+0.036}_{-0.037}$	$\chi^2_{6DF}$	$0.061 (\nu: 0.0)$
$A_{143 \times 217}^{dustTT}$	$17.2^{+8.1}_{-8.0}$	$Age/Gyr$	$13.789^{+0.083}_{-0.085}$	$\chi^2_{MGS}$	$1.38 (\nu: 0.2)$
$A_{217}^{dustTT}$	$82^{+10}_{-10}$	$z_*$	$1090.2^{+1.3}_{-1.3}$	$\chi^2_{DR11CMass}$	$2.90 (\nu: 0.3)$
$c_{100}$	$0.9979^{+0.0016}_{-0.0015}$	$r_*$	$144.66^{+0.73}_{-0.76}$	$\chi^2_{DR11LOWZ}$	$0.73 (\nu: 0.2)$
$c_{217}$	$0.9960^{+0.0029}_{-0.0028}$	$100\theta_*$	$1.04123^{+0.00084}_{-0.00082}$	$\chi^2_{prior}$	$7.5 (\nu: 6.4)$
$H_0$	$67.7^{+1.2}_{-1.2}$	$D_A/Gpc$	$13.894^{+0.073}_{-0.073}$	$\chi^2_{CMB}$	$20513.1 (\nu: 26.3)$
$\Omega_\Lambda$	$0.690^{+0.015}_{-0.016}$	$z_{drag}$	$1060.0^{+2.1}_{-2.0}$	$\chi^2_{BAO}$	$5.1 (\nu: 0.5)$
$\Omega_m$	$0.310^{+0.016}_{-0.015}$	$r_{drag}$	$147.35^{+0.83}_{-0.85}$		

$$\bar{\chi}^2_{eff} = 20525.63; R - 1 = 0.01591$$